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BEFORE THE ARIZONA CORPORATION COMM

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AZ CORP COMMISSION
DOCKET CONTROL

COMMISSIONERS

GARY PIERCE, Chairman
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BRENDA BURNS

IN THE MATTER OF THE APPLICATIONOF GOODMAN WATER COMPANY, AN ARIZONA CORPORATION, FOR (i) A DETERMINATION OF THE FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND (ii) AN INCREASE IN ITS WATER **RATES** AND CHARGES FOR UTILITY SERVICE BASED THEREON.	**DOCKET NO: W-02500A-10 -0382** **NOTICE OF SUBMITTAL OF DIRECT TESTIMONY BY AN INTERVENOR**

By means of this filing, James Schoemperlen is hereby submitting copies of direct testimony in opposition to the proposed increase in Goodman Water Company's water rates.

RESPECTFULLY SUBMITTED this 21st day of March, 2011.

Arizona Corporation Commission
DOCKETED
MAR 18 2011
DOCKETED BY

James Schoemperlen

39695 S. Horse Run Dr.
Tucson, AZ 85739
Phone: (520) 299-3252
E-mail: jimschoemp@comcast.net

ORIGINAL and Thirteen (13) copies of the foregoing to be filed the 21st day of March 2011 with Docket Control.

Docket Control
Arizona Corporation Commission
1200 West Washington Street
Phoenix, AZ 85007

A copy of the foregoing Notice will
be emailed or mailed this same date:

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BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF GOODMAN WATER CORPORATION, FOR (i) A DETERMINATION OF THE FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND (ii) AN INCREASE IN ITS WATER RATES AND CHARGES FOR UTILITY SERVICE BASED THEREON.	**DOCKET NO: W-02500A-10-0382**

DIRECT TESTIMONY OF

JAMES SCHOEMPERLEN

(RATE BASE, INCOME STATEMENT AND RATE DESIGN)

March 21, 2011

TABLE OF CONTENTS

I. INTRODUCTION, QUALIFICATIONS AND PURPOSE

Q1. PLEASE STATE YOUR NAME AND ADDRESS.

A1. My name is James M. Schoemperlen. My home address is 39695 South Horse Run Dr. Tucson, AZ 85739

Q2. DO YOU LIVE IN THE EAGLE CREST RANCH SUBDIVISION?

A2. Yes

Q3. WHAT IS YOUR PROFESSION, BACKGROUND AND EDUCATION?

A3. I am a Certified Public Accountant; I am the Corporate Controller for Sargent in Tucson which is an Aerospace Company. I have a BBA in Accounting from the University of Wisconsin. I have a Master's of Science Management from the University of Wisconsin with concentration in Finance.

Q4. AS PART OF YOUR EDUCATION, DID YOU STUDY ANY OF THE CONCEPTS OF COST OF EQUITY ESTIMATES USING DISCOUNTED CASH FLOW AND THE CAPITAL ASSET PRICING MODEL?

A4. Yes, my Master's thesis was written based on the analysis of these models.

Q5. PLEASE SUMMARIZE YOUR PRIOR WORK EXPERIENCE

A5. Brief summary as follows:
As Corporate Controller for Sargent in Tucson I have prepared numerous analysis for large capital additions including a recent significant expansion for the Tucson operations and I have led our mergers and acquisitions efforts analyzing numerous potential targets , Prior to that I was a divisional controller for Walbro Engine Management in Tucson, Prior to that I was controller for Lear Corporation in Janesville Wisconsin where I participated

in a major plant expansion using robotics and was successful in obtaining significant funding from the state of Wisconsin for that expansion, Prior to that I held various Controllership positions with Motorola in Chicago IL and performed the analysis for major plant expansions both domestic and international , Prior to that I worked as an Auditor for KPMG, one of the largest audit firms in the world and had concentrated audit experience in both commercial manufacturing and health care.

Q6. DO YOU HAVE ANY EXPERIENCE IN REGULATED BUSINESSES?

A6. Yes, as a Senior Auditor in Charge with KPMG, I specialized in the Health Care Industry which is highly regulated through both the Medicare and Medicaid programs. Significant rate validation processes are required to participate in these programs and I prepared the analysis for KPMG's clients which included major hospitals and health care facilities.

Q7. HAVE YOU DONE ANYTHING SPECIAL TO FAMILIARIZE YOURSELF WITH THE PRICIPALS OF REGULATION IN THE WATER INDUSTRY?

A7. Yes, I have reviewed the manuals "Principles of Water Rates, Fees and Charges, manual of water supply practices M1- fifth edition" and "Water Rates, Fees, and the Legal Environment – second edition", both published through the American Water Works Association (AWWA).

Q8. CAN YOU GIVE US A SUMMARY OF YOUR CONCLUSIONS ON THE GOODMAN WATER RATE INCREASE REQUEST BASED ON YOUR FINANCIAL KNOWLEDGE AND THE REVIEW OF THESE MANUALS?

A8. **Regarding the Rate Base and Rate Design** - the objectives of the rate validation processes are very similar to what is performed in the health industry to validate rates. "The premise is that costs need to be allocated to customers based on the required service levels and at the rates of use the customer wants.... A sound analysis of the adequacy of charges requires

that costs be allocated among the customers commensurate with their service requirements." (See Folder – D, P. 49, AWWA Manual – M1). The GWC - Bourassa analysis does not comply with sound analysis since there are significant portion of costs that are not allocated to the proper user base, namely future users. As indicated by AWWA Rates Fees and the Legal Environment, "Rate design concerns the manner in which individual customers, or groups of customers, are billed. Rate designs are developed to promote equity among customers by charging each customer in such a way that a customer is neither subsidized by nor subsidizes other customers. Several significant rate design issues were addressed and decided in cases such as Durant v. City of Beverly Hills (1940), Village of Niles v. City of Chicago (1980), and the City of Pompano Beach v. Oltman (1980)". This would also include Intergenerational Rate Inequity. Since there are currently about 677 built out lots and since current **advertised** build out of the Eagle Crest Ranch subdivision is scheduled at 920 service customers and since Mr. Mark Taylor of Westland Resources, Inc. (the engineering group responsible for the design of the Goodman Water facilities) has indicated that the Water Works is designed for approximately 1,291 equivalent housing units, there is significant excess capacity that has not been accounted for in the analysis. It should also be noted that the ACC staff itself has determined that the capacity of the Goodman Water facilities is approximately 1,800 equivalent housing units (See folder – C, ACC 1800 Units_p2.pdf). It is evident that the design of the GWC-Bourassa allocation of costs includes significant intergenerational rate inequity with current users paying for the capacity requirements of future users.

Also, as pointed out by the AWWA book, "Water Rates, Fees, and the Legal Environment", Folder-E (Reasonableness and non-discriminatory.pdf, P16), they point out that the law defines Reasonable Water rates as follows.

"Reasonable water rates are rates that are based on generating sufficient revenues to operate the water utility in a ***prudent*** [emphasis added] manner and without any undue discrimination among customers."

They go on to discuss what is meant under the law by the term "fair and equitable rates".

"The term fair and equitable rates [emphasis added], also called ***cost-of-service-based rates*** *[emphasis added] (COS),* in rate making refers to a cost causality between rates and the customer's bill. Such rates promote each customer to **pay his or her cost share of the service without being subsidized by other customers or without subsidizing other customers**"[emphasis added],

As indicated on P.149 – P.150 [Folder E – Water Rates Fees and the Legal Environment] of "Water Rates, Fees and the Legal Environment", "Prompted by customer price exploitation practices exercised by railroads that were granted franchises by the United States, federal laws were enacted to disallow utilities from exercising monopolistic pricing powers. The definition of utility was expanded from the railroad and interstate transportation industries to eventually include electric, gas, water, wastewater, telecommunications, and other utilities. The concepts of fair and just, or equitable, service rates became the principles used to fight monopolistic pricing behavior."

Cases cited affecting Water rates and fees include:

Bluefield Water Works & Improvement Company v. Public Service Commission of West Virginia, 26 US 679 (1923) (objective of fair and reasonable rate of return); Durant v. City of Beverly Hills (objective of reasonableness and fairness)

Subsidizing customers [P.150 Rates, Fees & Legal Environment] "....include costs intended to be used to subsidize any other customer(s) or customer class. "

The AWWA book "Rates, Fees & legal Environment" on P. 152 [Folder E, Rates, Fees and the Legal Environment, Intergenerational Rate Discrimination_P152.jpg] also indicates that "Price discrimination by itself is not prohibited by law. ....Only unjust price discrimination is prohibited. .... Equitable rates by definition, are cost-based *[i.e. (COS) as defined at the bottom of page*

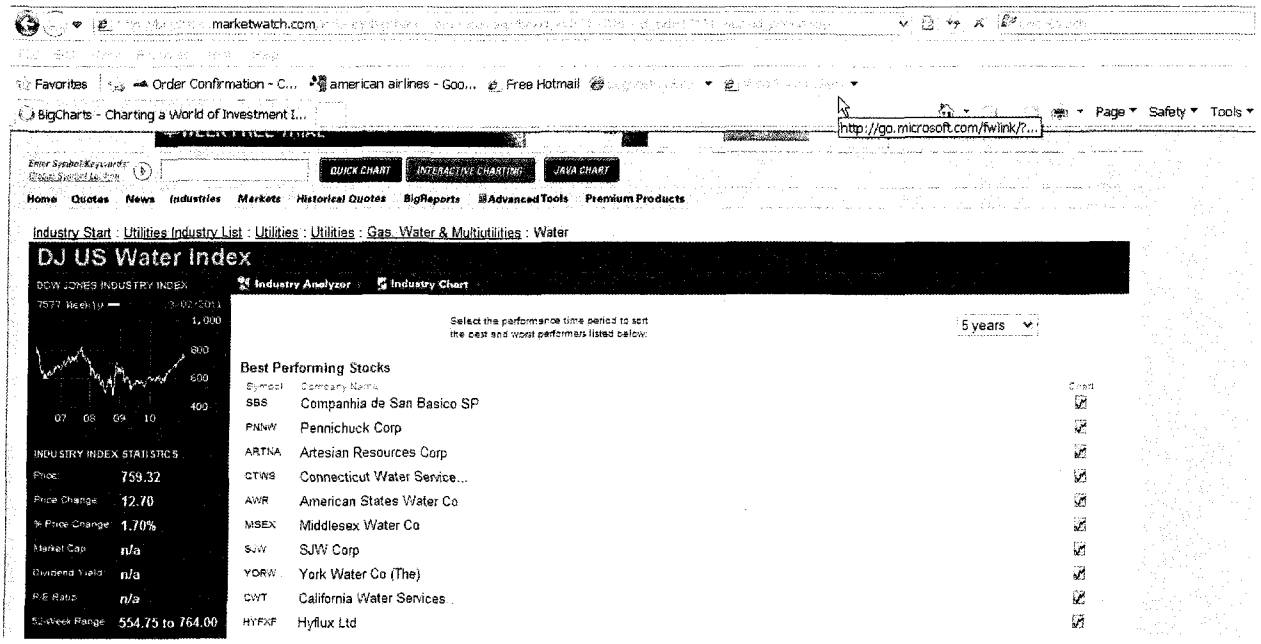
5 above] rates that avoid unjust price discrimination. Price discrimination is not only limited to interclass prices but can also occur in intra-class (for example between single-family home customers) and **inter-generational perspectives (between new users and existing users). "**[emphasis added]

As Water Rates Fees and the Legal Environment points out Folder-E, Cost of Service.pdf on page 14, "The 2001 Colorado court ruling (Krupp v. Breckenridge Sanitation District) .... established a strong COS relationship between financial objective, such as growth-pays-for-growth and the buy-in method." Also, as indicated at the top of page 151, Rates, Fees and the Legal Environment [Folder E, AWWA Water Rates Fees and the Legal Enviornment, Equal Protection_Water Pricing Legal Principals_P151.jpg,] "Equal Protection under the Law requires governments and businesses to treat persons the same way without preferential (advantageous or disadvantageous) treatment."

Regarding Rate of Return - with the GWC/Bourassa calculations I have issues in how they apply the calculation of cost of Capital. To begin with, we must recognize that the calculations under both the Capital Asset Pricing (CAPM) and the Discounted Cash Flow (DCF) models are highly dependent on the selections used for the calculations. Additionally, Bourassa first indicates that "GWC is not directly comparable to the sample utilities....." A22, A29, A58 but he continues on to use those companies as "Proxies" and makes calculations based off that.

One thing that Mr. Bourassa failed to mention is that of the 6 stocks he picked as comparatives and that were used in both his CAPM and DCF models, 5 were on the list of best performing stocks in the Dow Jones US Water index as listed in the site bigcharts.marketwatch .com and re-produced below [1] :

(Chart-A)



[1] *Note that a five year review is used to be consistent with the GWC water analysis which generally uses 5 year return calculations. See Bourassa schedule D-4.9 footnote (1)*

Here are the returns of the stocks picked as the Bourassa sample for the last 5 years, compared to the Dow Jones US Water Utility index and the S&P 500.

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(Chart-B)

FISHER INVESTMENTS
PRIVATE CLIENT GROUP

Performance Comparison
As of 3/8/2011

Index / Position	(Cumulative) 5 Year (2/28/06 - 2/28/11)	(Average) 5 Year (2/28/06 - 2/28/11)
DJIA	27.2%	5.4%
S&P 500	15.2%	3.0%
Dow Jones US Water Utilities Index	-7.3%	-1.5%
AWR	11.5%	2.3%
WTR	-10.5%	-2.1%
CWT	-5.7%	-1.1%
CTWS	21.5%	4.3%
MSEX	19.0%	3.8%
SJW	9.1%	1.8%

Source: Thomson Reuters, Fisher Investments Research,

 March 2011

What pops out of this comparison is that Water Utilities returns generally run below the S&P 500 and the S&P 500 returns generally run below the Dow Jones Industrial Average. Note how far above the Water Utilities Average most of the stocks picked as comparisons are. This is not an impartial analysis. Basically if the stocks are "cherry picked" to produce the desired results, we will not get a fair view of general market trends. Since the results have obviously been skewed, I would suggest that the results of all of Bourassa's calculations here be thrown out since both his CAPM and DCF calculations are based on this sample.

In addition, as further proof that there is something significantly wrong with the analysis, the overall returns computed as a result of all of those Bourassa calculations yield a required return of 10.54%. One of the first things that should be done after performing financial analysis is to determine if the final results of the calculations make sense. Following is the return of the Dow Jones Industrials Average for the last ten years.

(Chart-C)

FISHER INVESTMENTS
PRIVATE CLIENT GROUP

Performance Comparison

As of 3/8/2011

Index / Position	(Cumulative) 10 Year (2/28/01 - 2/28/11)	(Average) 10 Year (2/28/01 - 2/28/11)
DJIA	48.2%	**4.82%**

Source: Thomson Reuters, Fisher Investments Research, (

 March 2011

The Dow Jones Industrial Average represents the return from core companies of our economy and the leaders in the industry representing the companies with more risk than water utilities and the highest average returns in the market. So how do we reconcile the 4.82% return of the DJIA and the 3% return of the S&P 500 with the **10.54%** return requested by

GWC? We can only conclude that there is something seriously wrong here. Bourassa's calculations do not make sense.

I will discuss more on the issue above and other objections I have to Bourassa calculations below in A-11, f.

Q9. ON WHO'S BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?

A9. I am testifying as an intervenor on behalf of myself in this case.

Q10. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A10. I will testify to challenge the propriety of the Goodman Water Company (GWC) adjustments to its rates and charges for water utility service as prepared and presented by Thomas J. Bourassa.

II. OVERVIEW OF CHALLENGE TO GWC'S REQUEST FOR RATE RELIEF

Q11. PLEASE SUMMARIZE YOUR OBJECTIONS TO GWC'S RATE APPLICATION

A11. Following are my objections to the GWC rate request:

a. Proposed rates as requested by GWC are **not Reasonable and Non-discriminatory in Nature**. The issue of Unreasonableness and Discrimination are demonstrated by a projection of returns at build out based on **920** units **at GWC request rates** which would be 18.5%, and **far** in excess of the 10.54% return they are requesting. The natural results to build out yield an **UNREASONABLE RETURN**. The only conclusion that can be drawn from this is if the rate request is granted the current generation of users (those who have homes now) will be paying for the future generation of users (those who will buy houses in the future). This is otherwise called **Intergenerational Rate Inequity and indicates that there is a major flaw in the rate design**. I will discuss more on Intergenerational Rate Inequity later. See Table-1 Col G and C below for comparison and (See Revenue Analysis-5 Goodman Water.xlsx, tab Results Comparison Sheet, Col G

& C, Folder James Schoemperlen Response, rows 95 through 148 Schedule reproduced below and tab "Revised Return on Equity Calc's" Table-3 reproduced below for Required Return calculations).

b. The cost of capital at 10.54% does not make sense when compared to overall market returns and the cost of capital. I will discuss reasons for this later. Just adjusting for a cost of capital which makes sense, which I will demonstrate later, will require a cost of capital in the neighborhood of 7.16%.

If a 7.16% cost of capital were used at 920 build out under current rates requires Operating Income of $171,655 ($2,397,419 X 7.16%) [at 920 build out – current rates Operating income is $247,152; the $247,152 - $171,655 = $75,497 and $75,497 /$816,248 = 9.25%, see col H in table 1] this leads to a 9.25% **reduction** in **current rates**.

The return requirements calculated by Bourassa leads to returns for GWC in excess of general market returns where risk is much higher (i.e. risk/return trade off - the market dictates where risk is higher returns should be higher, returns for utilities should be lower than the general market).

c. No adjustment has been made in the calculations presented for the 920 build out level and the 1,291 to 1,800 unit capacity cited in answer A-8 above, which would represent excess capacity.

d. GWC is requesting adjustments for Salaries and Wages for a 25% increase. This is clearly unreasonable under current economic conditions. Likewise, adjustments have been made in the GWC/Bourassa for a 148% increase in property taxes for which no reasonable substantiation was included.

e. General Discussions:

i. Table 1 below shows;

1. Col I – the returns for the test year as presented by Bourassa for comparative purposes and starting point.
2. Col G – the GWC requested rate increase
3. Col H – Returns that will be generated at build out of the 920 homes **under current rates**.
4. Col C – Returns at 920 unit build out if the GWC proposed rates were granted.
5. Col D – Returns that would be generated at build out if excess capacity were removed as cited in answer A-8 above were removed.
6. Col E – Adjusting for a reasonable rate of return with excess capacity removed.

(Table - 1) – Comparative returns

		Col C	Col D	Col E	Col F	Col G	Col H	Col I	
94	(See Spreadsheet for Detail Calculations)		(Revenue numbers per Revised return on Equity)						
95	Goodman Water Company					See Sched A-2, P1-Bourassa		See Sched C-1, P1-Bourassa	Schoemperlen, Jim: from "Revised Return on Equity Calcs, sum D28:D31
96	Comparison of Water Rates and Users		Goodmans Suggested						
97	Schoemperlen, Jim: from "Revised Return on Equity Calcs, sum F28:F31		Return Excess Capacity Removed Intervenor	Cost of Capital Adjust Excess Capacity Removed Intervenor		Goodman's Requested P&L	Goodmans Suggested Return	Goodmans Presentation	
100		920 Build Out Proposed Rates	Suggested Rates	Suggested Rates	Comments	Year End Users Proposed Rates	920 Build Out Current Rates	Average Users Current Rates	
101									
102	Total Metered Water Revenue	$ 1,230,933.63	$ 521,643.33	$ 457,303.76		$ 850,096.00	$ 816,248.80	$ 558,013.00	
103	Other Water Revenue (Per Bourassa	$ 13,738.00	$ 13,738.00	$ 13,738.00		$ 13,738.00	$ 13,738.00	$ 13,738.00	
104	Total Requested	$ 1,244,671.63	$ 535,381.33	471,041.76	Schoemperlen, Jim: Required revenue decrease %	863,834.00	$ 829,986.80	$ 572,751.00	
105		Cost Data from Schedule c-1 Page 1							
106	Change in Expenses with Volume								
107	Required Rate Deduction		-6.1%	-18.1%					
108	Salaries and Wages	$ 40,000.00	$ 33,600.00	$ 33,600.00	Old Salaries + 5%	$ 40,000.00	$ 33,600.00	$ 40,000.00	Fixed (Assumes 8,000 increase on 32,000 in salaries, 25% - Not Reasonable, use 5%)
109	Purchase Water								
110	Purchased Power	$ 38,938.56	$ 27,066.00	27,066.00		$ 27,066.00	$ 26,005.49	$ 27,066.00	Assume Vary Directly w/ Revenue - Generous
111	Chemicals								
112	Repairs and Maintenance	$ 11,160.97	$ 7,746.00	$ 7,746.00		$ 7,746.00	$ 7,442.43	$ 7,746.00	Assume Vary Directly w/ Revenue - Generous
113	Office Supplies and Expense	$ 21,404.11	$ 14,855.00	$ 14,855.00		$ 14,855.00	$ 14,272.94	$ 14,855.00	Assume Vary Directly w/ Revenue - Generous
114	Outside Services	$ 148,301.44	$ 102,925.00	102,925.00		$ 102,925.00	$ 98,892.14	$ 102,925.00	Assume Vary Directly w/ Revenue - Generous
115	Water Testing	$ 1,750.66	$ 1,215.00	$ 1,215.00		$ 1,215.00	$ 1,167.33	$ 1,215.00	Assume Vary Directly w/ Revenue - Generous
116	Rents								
117	Transportation Expenses								
118	Insurance - General Liability	$ 3,663.00	$ 3,663.00	$ 3,663.00		$ 3,663.00	$ 3,663.00	$ 3,663.00	Fixed
120	Regulatory Commission Expense - Rate Case	$ 20,000.00	$ 20,000.00	$ 20,000.00		$ 20,000.00	$ 20,000.00	$ 20,000.00	Fixed
121	Miscellaneous Expense	$ 544.65	$ 378.00	$ 378.00		$ 378.00	$ 363.19	$ 378.00	Assume Vary Directly w/ Revenue - Generous
122	Depreciation Expense	$ 228,403.00	$ 173,908.85	$ 173,908.85	Excess Cap Removed	$ 228,403.00	$ 228,403.00	$ 228,403.00	Fixed
123	Taxes Other Than Income	$ 4,305.32	$ 2,988.00	$ 2,988.00		$ 2,988.00	$ 2,870.92	$ 2,988.00	Assume Vary Directly w/ Revenue - Generous
124	Property Taxes	$ 21,295.00	$ 9,004.80	$ 9,004.80	5% increase on Prop Tx	$ 21,295.00	$ 9,004.80	$ 21,295.00	Fixed but increased off a base of 8,576 to 21,295, 148% not reasonable. Use 5% inc.
125	Income Tax -Marginal rate at : 38.50%	$ 254,551.80	$ 36,453.60	$ 3,407.51		$ 134,607.00	$ 131,142.55	$ 22,644.00	Calculated on Marginal Revenue
126	subtotal	$ 800,384.50	$ 433,803.25	$ 406,763.15		$ 611,147.00	$ 582,833.92	$ 486,184.00	
127	Income Before Interest Expense	$ 444,287.13	$ 35,572.08	$ 64,878.61		$ 252,687.00	$ 247,152.89	$ 73,567.00	
128	Less Interest Expense	$ 37,341.00	$ 37,341.00	$ 59,435.44		$ 37,341.00	$ 37,341.00	$ 37,341.00	
129	Total Expenses	$ 837,725.50	$ 477,150.25	$ 466,198.60		$ 648,488.00	$ 620,174.92	$ 536,525.00	
130	Net Income	$ 406,946.13	$ 58,231.08	$ 5,443.16		$ 215,346.00	$ 209,811.83	$ 36,226.00	
131	Effective Tax Rate - Bourassa, schedule B2 P 5			38.5%					
132	Fair Value Rate Base for 920 homes	$ 2,397,419.00	$ 2,397,419.00	$ 2,397,419.00		$ 2,397,419.00	$ 2,397,419.00	$ 2,397,419.00	
133									
134	Effect of Rate Return	18.5%				10.54%	10.31%	3.07%	
135	Fair Value Deductions:						$ 252,687.36		
136							10.54%		
137	Income requirement change						$ 5,535.08	Per Bourassa Sched A-1, Page 1, current return	
138	% change requirement						0.67%		
139	Reduction in Revenue Requirement at 7.16% cost of Capital						-9.25%		
140	Adjustment for Used and Useful (1300 Eq units vs. 930 at build ou		$ (1,490,663.46)	$ (1,490,663.46)					
141	Total Adjusted Rate Base		$ 906,755.93	$ 906,755.93				$ 2,397,419.42	
142	Effective Rate of Return		10.54%	7.2%					
143									
144	Plant Added Phase IV, 2008 Additions	$ 1,737,370.00							
145	Unused Capacity Adjustment	$ 1,490,663.46							
146	Rate Adjustment Percentage	85.8%	From workbook" Lot Information Summary2.xlsx sheet Summary Capacity Usage cell J25"						

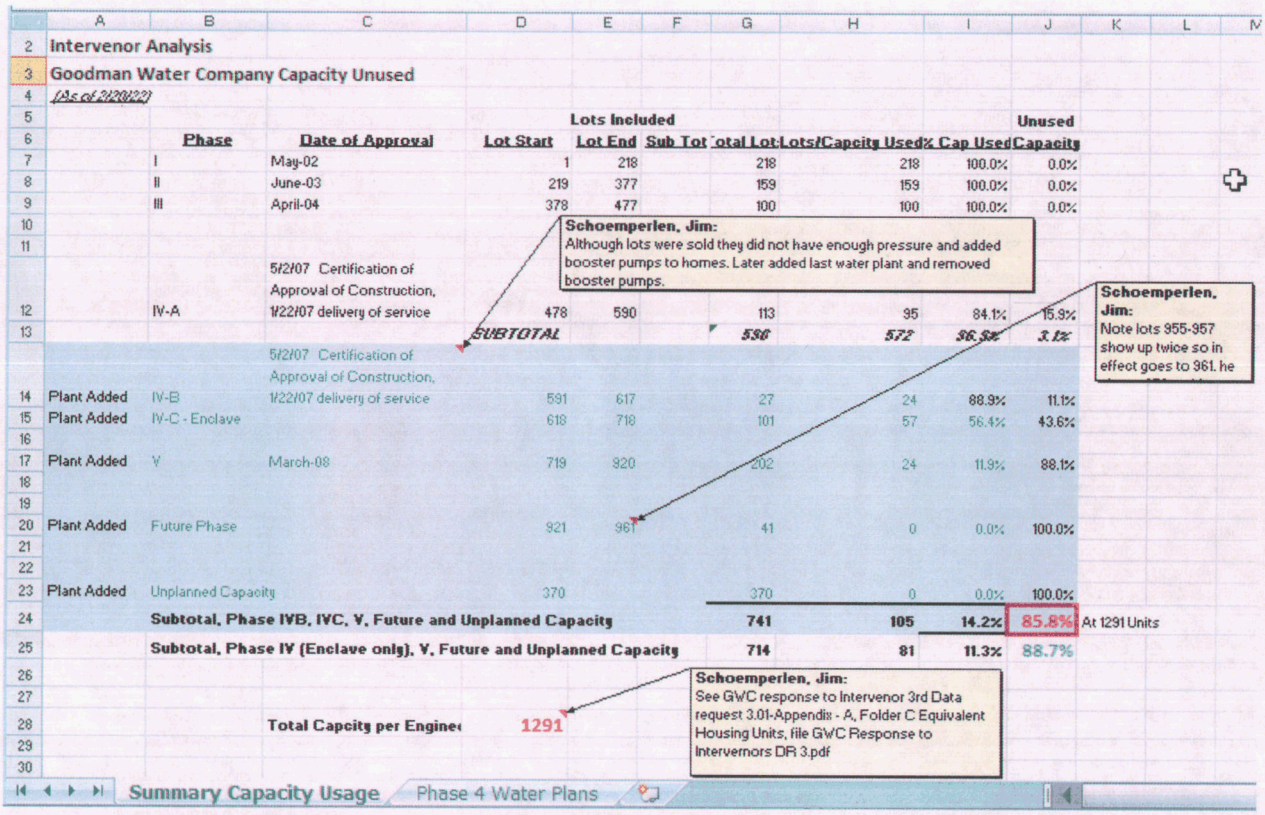
A. Notes and conclusions regarding the columns of the analysis in Table-1.

1. Col I – As indicated these are the test year returns as indicated by GWC. Note the 3.07% return that Bourassa is calculating and claims is not a reasonable return. In A-8 Chart-B above, notice that the Water Utilities Market index is -1.5% and with a 3.07% return he is outperforming 4 out of the 6 stocks he "Cherry Picked" for his sample.
2. Col G – GWC returns at requested rates. As indicated previously, the 10.54% request return is ridiculous.
3. Col H – Calculations at 920 build out using **CURRENT RATES.** Note that returns at build out using the now current rates would generate a return of 10.31%, 0.23% less than his ridiculous 10.54% request and that it would take only a 0.67% increase in revenues to get to the unreasonable 10.54% return. We have made adjustment for salaries of a more reasonable 5%, instead of the 25% requested based on current economic conditions where many companies are freezing salaries and for property taxes where 148% increase was requested without reasonable evidence, in an economy where real estate prices have fallen drastically. For property taxes we allowed 5% increase. Note we have not adjusted here for a more reasonable cost of capital. **We feel the cost of capital numbers are greatly out of order and need to be adjusted now to make sure the errors are not carried over in future analysis**. If we adjust for a more reasonable cost of capital of 7.16% (this cost of capital rate will be discussed later), this would lead to a **9.25% reduction in required revenues**. Also, we believe there is a **significant excess capacity issue here that needs to**

be resolved for the same reason. The excess capacity issue will be discussed later. Also of note is the fact that at Build out, if they are essentially getting their cost of capital (which we believe is ridiculous and must be corrected), it is obvious that the GWC rates proposed are the result of Intergenerational Rate Inequity.

4. Col C – Calculation of the results of the proposed rates at build out. Notice that the return is 18.5%, far in excess of the ridiculous 10.54% return they are requesting. The only logical conclusion is that there is **significant Intergenerational Rate Inequity** built into the GWC rate request.
5. Col D – Removes the excess capacity as discussed later. This leads to a 6.7% reduction in the **CURRENT REVENUE RATES** (i.e. **not** the GWC proposed rate increase).
6. Col E – Removes the Unreasonable Return Request and replaces that with a more reasonable request (7.16%). **IT IS ESSENTIAL THAT THIS ISSUE BE ADDRESSED IN THE CURRENT CASE BECAUSE IT WILL TEND TO CREEP BACK INTO LATER RATE REQUESTS IF IT IS NOT.** To get to the 7.16% return leads to an 18.1% reduction in **CURRENT REVENUE RATES** (i.e. **not** the GWC proposed rate increase).

(Table – 2) – Adjustment for Excess Capacity



Intervenor Analysis
Goodman Water Company Capacity Unused
(As of 2/28/22)

	Phase	Date of Approval	Lot Start	Lot End	Sub Tot	Total Lots	Lots/Capcity Used	% Cap Used	Unused Capacity
			Lots Included						
	I	May-02	1	218		218	218	100.0%	0.0%
	II	June-03	219	377		159	159	100.0%	0.0%
	III	April-04	378	477		100	100	100.0%	0.0%
	IV-A	5/2/07 Certification of Approval of Construction, 1/22/07 delivery of service	478	590		113	95	84.1%	15.9%
	SUBTOTAL					590	572	96.9%	3.1%
Plant Added	IV-B	5/2/07 Certification of Approval of Construction, 1/22/07 delivery of service	591	617		27	24	88.9%	11.1%
Plant Added	IV-C - Enclave		618	718		101	57	56.4%	43.6%
Plant Added	V	March-08	719	920		202	24	11.9%	88.1%
Plant Added	Future Phase		921	961		41	0	0.0%	100.0%
Plant Added	Unplanned Capacity		370			370	0	0.0%	100.0%
	Subtotal, Phase IVB, IVC, V, Future and Unplanned Capacity					741	105	14.2%	85.8%
	Subtotal, Phase IV (Enclave only), V, Future and Unplanned Capacity					714	81	11.3%	88.7%
	Total Capcity per Engine		1291						

Schoemperlen, Jim:
Although lots were sold they did not have enough pressure and added booster pumps to homes. Later added last water plant and removed booster pumps.

Schoemperlen, Jim:
Note lots 955-957 show up twice so in effect goes to 961 he

At 1291 Units

Schoemperlen, Jim:
See GWC response to Intervenor 3rd Data request 3.01-Appendix - A, Folder C Equivalent Housing Units, file GWC Response to Intervenors DR 3.pdf

Summary Capacity Usage | Phase 4 Water Plans

(Source Folder, James Schoemperlen Response, Lot Information Summary2.xlsx)

f. **Discussion of Excess Capacity - Important to the facts of this analysis is that the service area Phases I, II, III and IV-a (In Table -2 above) had water service which included sufficient fire flow before the capital additions in 2008.** This is verified by, response from GWC to the intervenors 3rd set of data requests question 3.02 wherein we are requesting verification of water service to phase IV-A and IV-B and GWC indicates that service was first delivered on 2/22/07 [We believe that after the fact GWC found they had insufficient water pressure to service lots IV-C, which were built on a steep incline, since all houses built there initially had individual booster pumps before the new water plant capacity in 2008 was added, and they

were later removed]. We also know that Certification for Approval of Construction was granted on 5/2/07 (If approval is granted they must have appropriate water delivery and Fire Flow).

As further evidence that the 2008 addition was not **useful** to the entire water system, a letter from the Arizona Corporation Commission found that "... Water Plant No. 3 site consisting of a 340,000 gallon storage tank and a booster system will serve only a portion of the water system". See Folder-C Equivalent Housing Units ACC 1800 Units_p2.pdf (second paragraph) and See Table-2 "Lot Information Summary.xlsx Workbook, Summary Capacity Usage worksheet", reproduced above.

As previously discussed, GWC has excess capacity. If we remove that excess capacity based on the **1291** equivalent housing unit capacity (85.8% unused capacity for the GWC addition in 2008 – see Table 2 above) indicated by Westland Resources in intervenors 3rd set of data requests, Folder D, Other Information, "GWC Response to Intervenors DR 3.pdf, question 3.01, Folder D Other Information, img013 to 016.jpg) per Table 1 above cell D107 we would have a 6.7% **reduction in current revenue rates**. Additionally, the Arizona Corporation Commission granted approval for expansion of the Goodman Water Works Facility to a total of **1750** equivalent units , see ACC Docket NO. W-02500A-05-0443, Decision No. 68444. Dated Feb 02, 2006 attached in Folder-H, Goodman Water Expansion Plans, paragraph 13. Although the order above was cancelled through request of Goodman Water on **April 2, 2010** Docket No. W-02500A-05-0443, [See Folder H, Expansion West of Oracle.pdf and ECR West Cancel 040210.pdf] there is evidence that the water facility actually was increased to an 1800 Equivalent Unit Capacity as indicated by the letter dated 9/2/2010 by Mr. Steven M. Olea, Director Utilities Division ACC (See Folder C, Equivalent Housing Units, ACC 1800 Units_p2.pdf).

f. Folder - A shows that the rates requested by GWC are **unjust and unreasonable in their consequences** by comparing the rates that result with rates of surrounding areas. See Folder A, 2009RateStudy.pdf, pages 14 through 22 and Rate Comparison Calculations.xls. This study, prepared by the "Water Infrastructure Finance Authority of Arizona" based on 2009 monthly rates and average usage/month of 7,500 gallons indicates that Goodman Water had the dubious distinction of being in the top 3.1% of billing rates ($78.69) in the state of Arizona. If the rate increase request is granted the average cost of the monthly bill for 7,500 gallons of usage will go to $122.36 and will result in Good Water Rates being the **second highest in all of Arizona**.

g. GWC is not earning their expected returns because it has not been prudent in its management of the company. This is demonstrated by GWC's response to the Wawrzyniak/Schoemperlen second set of data requests question 2.15 where the following question was asked:

Q. Please provide a copy of all financial analysis Goodman Water Company performed for construction of additions to Goodman water plan, equipment and infrastructure.

A. The Company has not prepared any "financial analysis" for construction of additions to Goodman Water Company water plant other than schedules for the costs of plan additions, depreciation schedules, and sources of funding which have been provided.

As indicated on page 11 & 12 of "Water Rates, Fees and the Legal Environment", [Folder E-Water Rates, Fees and the Legal Environment, Reasonable Return.pdf (for page 11) and AWWZ Rates Fees and the Legal Environment P12.jpf (for page 12)], which cites the case Bluefield Water Works & Improvement Company v. Public

Service Commission of West Virginia, 262 US 679 (1923), "The return should be reasonable, sufficient to assure confidence in the financial soundness of the utility, and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its public duties". The major corollary to the return issue requires that the utility be managed efficiently and economically. In other words, without efficient and economical management, the utility would not automatically earn a reasonable return.

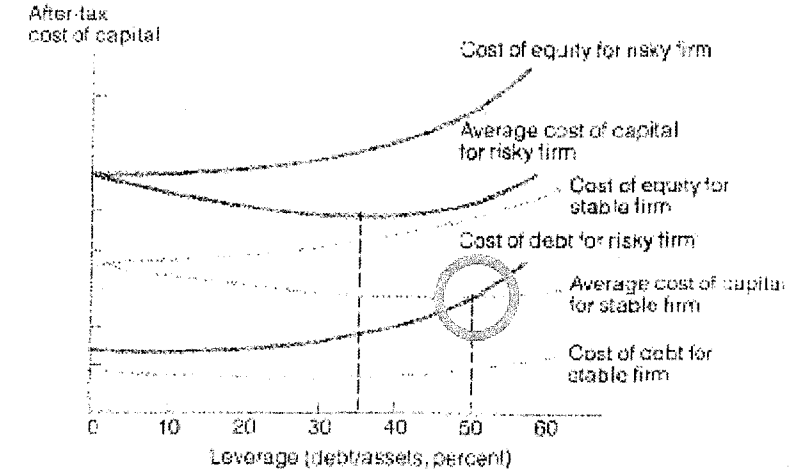
As indicated by various articles in Folder-B (i.e. Wall Street Journal etc.), the housing bubble had burst in 2006. If GWC had been prudent and conducted appropriate capital financial analysis, the $1,737,362 capital addition in 2008 would never have been made, and no new rate adjustments would have been required. So GWC has decided to pursue a rate increase, in effect a BAILOUT due to their excessive risk taking and imprudence. See Folder-B Burst of Housing Bubble articles "the-housing-bubble-starts-burs.pdf" and "Wall Stree Journal - Housing Bubble.pdf"

h. GWC has significant unused capacity as indicated in answer A-8 above. The lot information summary worksheet [table 2 above] shows the phases of addition to the GWC waterworks. Prior to the 2008 addition of capacity for water plant #3, Phases I, II and III were complete and receiving water services and fire flow protection. In fact, based on when owners took possession of homes in Phase IV-A and IV-B, there must have been adequate water services and fire flow protection from the existing system for those two phases as well or homes could not have been sold in those phases [again, we believe after the houses in Phase IV-B were built, GWC found they lacked enough water pressure and required booster pumps until the 2008 addition was built]. However, if we take all of Phase IV B&C, V, the Future phase - (homes 921 to 961) and "Unplanned" capacity

(1271 homes less the planned phases) and allocate the GWC water plant #3 addition to that and compare the unconnected lots to the total number of lots for those phases, we see that the unused capacity is 85.8%. See workbook Lot Information Summary2.xlsx Summary Capacity Usage tab. Workbook "Revenue Analysis-5 Goodman Water.xlxs, tab Results Comparison Sheet" column D (and the schedule presented above) shows the results of removing 85.8% of Plant Added in 2008 for GWC plant #3. The effect of removing the excess capacity would lead to a **6.7% decrease in *current* metered revenue requirement** (i.e. Metered Revenue Col D divided by Metered Revenue Col I).

i. **THE COST OF CAPITAL DISCUSSION -** Capital Structure minimizing cost of Capital. As indicated in the Weston and Brigham, managerial finance book page 712, a stable company will minimize its cost of capital if it strives for approximately a 50% debt/equity ratio (see reproduction below). As indicated in Bourassa's own testimony, A26 PP17-18, the companies picked in the sample had a debt to equity ratio of 50%. But Bourassa ignores this fact and seems to use only the arguments that promote the results he wants. There is a reason for the 50% debt/equity ratio in the sample as indicated in the Weston and Brigham excerpt. This is where a stable company will minimize its cost of capital. My re-work of the cost of capital calculations in Table-3 above allows some latitude by requiring only a 40%, debt to equity ratio. Clearly it is important for management to use leverage to minimize total cost of capital in the **prudently** run firm.

Figure 19-3
Hypothetical Cost of Capital Schedules for High-risk (R) and Low-risk (S) Firms



GWC is improperly setting their target Capital Structure as indicated above they should use at least a 40%/60% allocation of debt and equity to minimize overall capital costs. Current Composite Corporate Bond Rates averages per the IRS are running in the 5.49% to 6.10% range (See folder G, Cost of Capital, Corp Bond Rates.pdf).

However, the Water Infrastructure Finance Authority (WIFA) of Arizona has borrowing rates substantially below this and is currently running at 3.68%. WIFA Loan Rates.pdf.

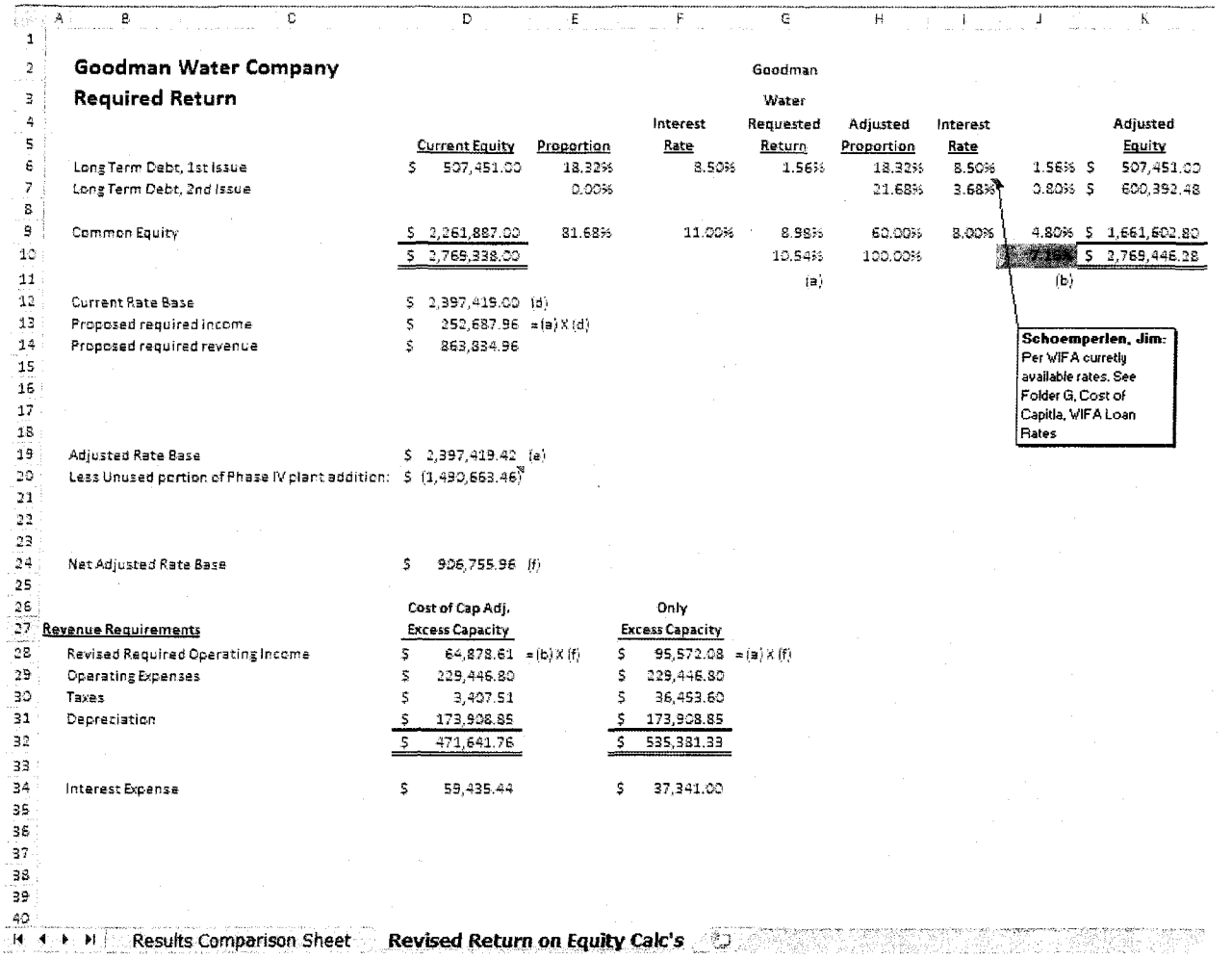
It should be noted that the debt that GWC did acquire was acquired at 8.5% and was borrowed from EC Development. The President of EC Development is Alexander Sears who is also Chairman and CEO of GWC (see folder G, Cost of Capital, GWC - Promissory Note to Goodman Ranch Associates.pdf). GWC was asked in the Wawrzyniak / Schoemperlen second set of Data Requests, question 2.11 whether or not they had sought to borrow funds from WIFA and indicated that the decision was made to not file a loan application. They listed a number of reasons for not doing so including WIFA plant reserve requirements, WIFA debt reserve requirements, potential for restrictions on issuing dividends, encumbrance of water plant assets, cost for accounting /legal engineering costs related to WIFA

financing, and a "Buy America" stipulation. Notice that they did not indicate for the GWC loan payable that they currently have payable to EC Development that Alexander Sears is President of EC Development and that Alexander Sears is also chairman, CEO and principal shareholder of GWC and that the loan was made at a rate significantly higher than the WIFA rates at that time, calculated at between (Prime x 95%) or 5.7%. This is not **PRUDENT** management and is highly questionable [See Folder G, Folder WIFA Loans, 2008 Prime Rates.jpg and WIFA Subsidy Rate 2008.jpg].

In question 2.15 of the intervenors 2nd set of data requests, the question was asked "Please provide a copy of all financial analysis Goodman Water Company performed for construction of additions to Goodman water plant, equipment and infrastructure". Their answer was "The Company has not prepared any "financial analysis" for construction of additions to Goodman Water Company water plant other than schedules for the costs of plant additions depreciation schedules, and sources of funding which have been provided." If they haven't prepared any analysis, how do they know that the approximate 4% interest rate difference is offset by the other perceived costs. Again, this is further evidence that management is **not prudent in management of the company**.

If GWC has their hands in their customers pockets to pay their costs they have an obligation to reach a more reasonable allocation between debt and equity which lowers the overall costs of capital and acquire debt at the best rates available.

(Table - 3) – Calculation of the Cost of Capital



Goodman Water Company
Required Return

	Current Equity	Proportion	Interest Rate	Goodman Water Requested Return	Adjusted Proportion	Interest Rate		Adjusted Equity
Long Term Debt, 1st Issue	$ 507,451.00	18.32%	8.50%	1.56%	18.32%	8.50%	1.56%	$ 507,451.00
Long Term Debt, 2nd Issue		0.00%			21.68%	3.68%	0.80%	$ 600,392.48
Common Equity	$ 2,261,887.00	81.68%	11.00%	8.98%	60.00%	8.00%	4.80%	$ 1,661,602.80
	$ 2,769,338.00			10.54%	100.00%			$ 2,769,446.28
				(a)			(b)	
Current Rate Base	$ 2,397,419.00	(d)						
Proposed required income	$ 252,687.96	= (a) X (d)						
Proposed required revenue	$ 863,834.96							
Adjusted Rate Base	$ 2,397,419.42	(e)						
Less Unused portion of Phase IV plant addition:	$ (1,490,663.46)							
Net Adjusted Rate Base	$ 906,755.96	(f)						

Revenue Requirements	Cost of Cap Adj. Excess Capacity		Only Excess Capacity	
Revised Required Operating Income	$ 64,878.61	= (b) X (f)	$ 95,572.08	= (a) X (f)
Operating Expenses	$ 229,446.80		$ 229,446.80	
Taxes	$ 3,407.51		$ 36,453.60	
Depreciation	$ 173,908.85		$ 173,908.85	
	$ 471,641.76		$ 535,381.33	
Interest Expense	$ 59,435.44		$ 37,341.00	

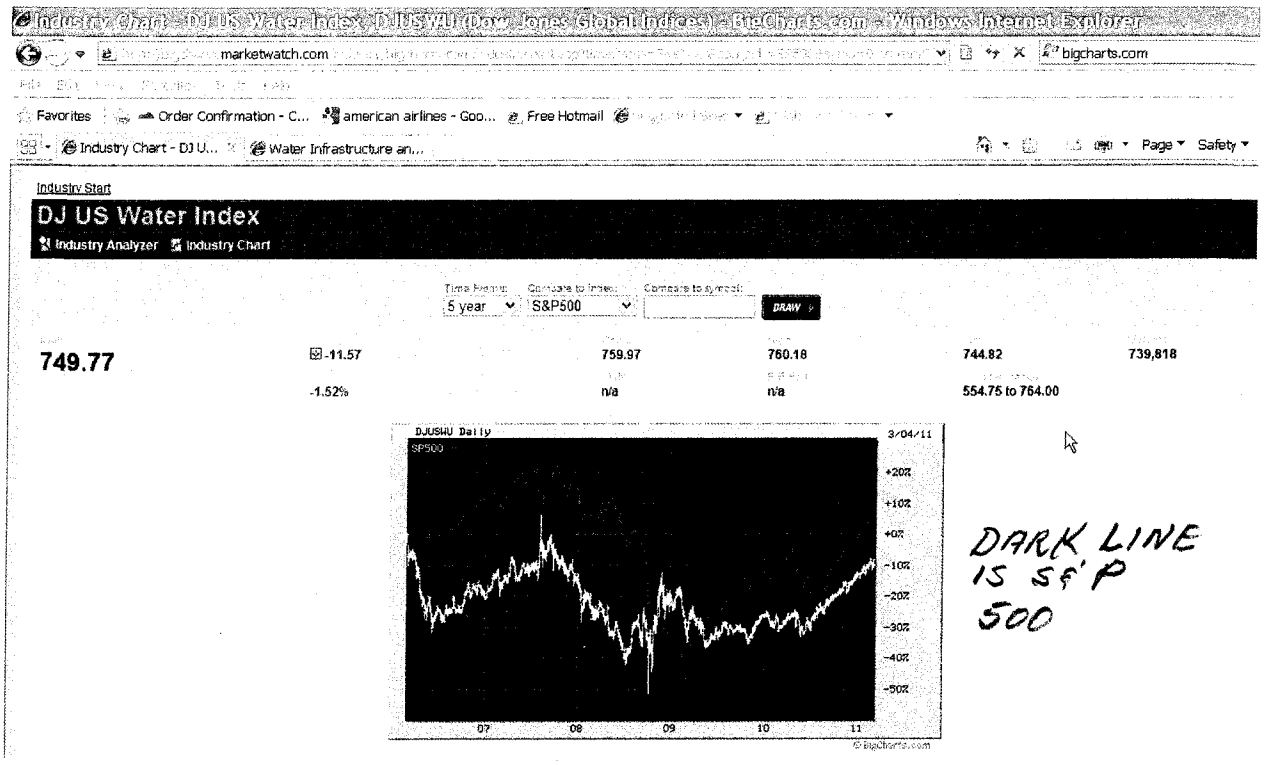
Schoemperlen, Jim: Per WIFA curretly available rates. See Folder G, Cost of Capitla, WIFA Loan Rates

Results Comparison Sheet | **Revised Return on Equity Calc's**

My analysis in Table -3 above uses the 3.68% cost for new debt available from WIFA [Folder G, Cost of Capital, Current WIFA Rates.jpg] and uses the conservative 40%/60% allocation which lowers the cost of capital.

j. Cost of Equity. After citing the issues with the Bourassa cost of capital calculations above, we note that if the analysis produces results which do not make sense, we need to question the overall validity of the methods employed.

Following is a comparison of the returns for the market on the S&P 500 compared to the DJUSWU (Dow Jones US Water Utility Index) for the last 5 years. We can see that the returns for S&P 500 for the last 5 years are greater than the DJUSWU index.



Also, following are the average returns for the S&P 500 Index over both a 5 yr and 10 yr period.

Total Returns % Data through 03-04-11

							YTD
S&P 500 Index					15.06		5.42
Trailing Total Return	**1 Month**	**3 Month**	**1 Year**	**3Yr Avg**	**5Yr Avg**	**10Yr Avg**	**YTD**
S&P 500 Index	1.00	8.38	20.01	2.14	2.67	2.62	5.42

S&P 500 Index data: S&P 500 Copyright © 2006

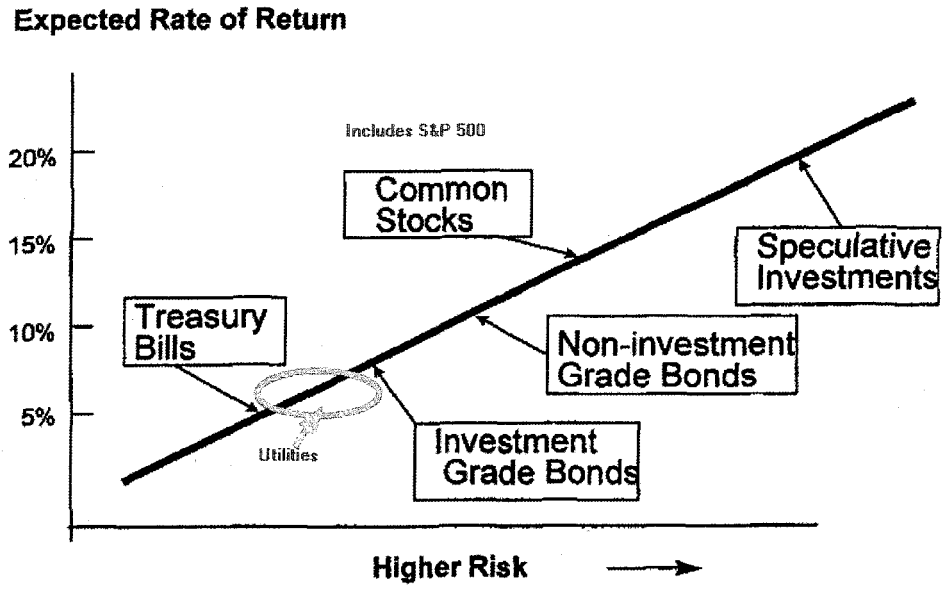
Since the 5/10 year S&P 500 average historical return over the last 10 years is 2.67% and since as indicated above the index outperforms the Dow Jones US Water Utility index, we know that if there weren't already anomalies built into the rate setting process, GWC should be

earning less than the 2.6% return **and their return for the test year was 3.07%.**

Note that Utilities are generally referred to as "Widows and Orphans Stocks" because they are stable, less risky and generally have higher dividends (See Folder G, "Widows and Orphans.jpg and Wallstreet-Widows and Orphans.jpg") then common stocks. As such, Widow and Orphans stocks should underperform the S&P 500 on average due to less comparative risk than common stocks and we see from the graph above this is true. If you take more risk you require a larger return. Bourassa goes through a litany of risks associated with the Utility industry but there is one very important risk that he has failed to mention the effects of, and that is **COMPETITION SINCE THEY HAVE A MONOPOLY IN THEIR MARKET**. In each utilities market they do not face competition and when the utility does not feel it is achieving a "Fair Return", they go back to the rate setting governmental body and ask for more money. This has a very stabilizing effect on the stock and the risk is much less. Over time, the government has realized there is the potential for abuse of the system and has set up organizations such as the Arizona Corporation Commission to oversee the process and interject fairness.

On page 137 of the Bourassa analysis in the application for the rate increase, reproduced below is the Capital Market Line which defines risk return trade off. Note that he included Speculative Investments, Non-investment Grade Bonds (Junk Bonds) and Investment Grade Bonds, ***all of which have an underlying company which does not have a monopoly position in its marketplace***. There is one grade of special investments he has not placed on the graph, Utilities.

The Capital Market Line (CML)



Utilities have more risk than treasury bills and less risk than Investment Grade Bonds because they exist in a monopoly market where their return is assured as long as they are **PRUDENT MANAGERS.** Notice the range of returns expected, that is an accurate depiction of what would be experienced by a Utility.

Schedule A-1 of Page 1 one of the Bourassa analyses however shows that GWC is currently earning 3.2%, even after the significant plant expansion that caused the dip in returns. What explains this anomaly? Bourassa had calculated the required GWC rate of return previously, requesting the same 10.5% return on rate base requested here. Although the commission cut that back to 9.3%., it is clear that that the effect of Bourassa's skewed samples has not been completely removed.

On page 29, A41, Bourassa calculates the DCF model using the average projected growth rate of 3.67% and determines that DCF return is between 7% to 7.4% and remember he is doing that without

the capital lowering effects of an appropriate balance between debt and equity. We remember that rate setting requires prudent management in all aspects including the use of leverage to lower the overall cost of equity. Also, remember that Bourassa has come up with these calculations using a stacked deck, as pointed out previously. He then indicates that the return is at or below the projected cost of investment grade bonds which makes sense because those bonds have an underlying risky investment, namely a company which must compete in the marketplace. Remember that he also has give us no convincing evidence that this return is in fact below the return of investment grade bonds through independent verification, even though we have already indicated that this would be OK if it were true but it isn't **AS THE SCHEDULE BELOW SHOWS, THE 7% TO 7.4% HE CALCULATED ACTUALLY WAS ABOVE THE BOND RETURN FORECAST**. Reproduced below is the analysis from Portfolio Solutions Group that shows the forecast for these long term and short term bonds (See Folder-G, Portfolio Solutions 30 year market forecast.pdf).

(Table – 4)

Thirty-Year Estimates of Bonds, Stocks and REITs Assuming a 2.8% Inflation Rate

Asset Classes	Real Return	With 2.8% Inflation	Risk*
Government-Backed Fixed Income			
U.S. Treasury bills (1-year maturity)	0.3	3.1	2
10-year U.S. Treasury notes	1.3	4.1	6
20-year U.S. Treasury bonds	1.5	4.3	7
20-year inflation protected Treasury (TIPS)	1.8	4.6	8
GNMA mortgages	1.8	4.6	8
10-year tax-free municipal (A rated)	1.5	4.3	7
Corporate and Emerging Market Fixed Income			
10-year investment-grade corporate (AAA-BBB)	2.4	5.2	9
20-year investment-grade corporate (AAA-BBB)	2.5	5.3	10
10-year high-yield corporate (BB-B)	4.0	6.8	15
Foreign government bonds (unhedged)	2.0	4.8	8
U.S. Common Equity and REITs			
U.S. large-cap stocks	5.0	7.8	19
U.S. small-cap stocks	6.0	8.8	22
U.S. micro-cap stocks	7.0	9.8	25
U.S. small-value stocks	8.0	10.8	27
REITs (real estate investment trusts)	5.0	7.8	19
International Equity (unhedged)			
Developed countries	5.0	7.8	19
Developed countries small company	6.0	8.8	22
Developed countries small value companies	8.0	10.8	27
All emerging markets including frontier countries	9.0	11.8	29

*The estimate of risk is the estimated standard deviation of annual returns

Since there is no good analysis for deleting the 7% to 7.4% DCF calculation for equity which was presented other than the "Cherry Picking" already mentioned and, I have included that as the equity cost of capital calculation and have arrived at a cost of capital of 8% for EQUITY after adding the ~1% company specific risk (which is highly subjective). Although we did not go through an averaging

method to include the other methods of calculation in this process, we need to remember that all of this analysis is highly skewed towards increased cost of capital anyway due to the method of "Cherry Picking" used for the sample utilities. Next I used the effects of reasonable Leverage (remember 40% which is lower and more conservative than the 50% Bourassa found his sample group was using) to lower the cost of capital, which any **PRUDENT** management would do and came up with an overall weighted cost of capital of 7.16%. My analysis is presented based on this cost of capital in Table 1, Column E only. Other columns in Table 1 are based on the 10.54% request or as presented in the Bourassa analysis.

Since I believe the Bourassa analysis is flawed, based on their desired results (a random sample of water utility stocks based on performance of the index would be more appropriate), it is likely that the real cost of capital should be somewhere in the 6% range.

k. After adjusting for the excess capacity and properly adjusting the cost of capital, the calculations show a reduction IN CURRENT REVENUE RATES (NOT AN INCREASE) of 16.3%. See Revenue Analysis-5 Goodman Water.xls , row 102 Column E, also presented in the schedule above.

l. Other issues with the GWC/Bourassa calculations of cost of capital include:

    1. Proxy for Beta of GWC is highly skewed due to sample selected, Bourassa A45.
    2. Bourassa discusses a number of risks the small company faces, but he does not address the rather large advantage of monopolistic power in the marketplace which most likely offsets the other risks.
    3. In A29, Bourassa states that "Bluefield Water Works require the use of comparable companies", but then he does not use them, negating the validity of his analysis.

4. Bourassa indicates in A27, that the "...lack of financial flexibility increase risk because it has no choice but to rely on .....WIFA loans". As indicated previously, this is an advantage because the rates are significantly below current debt rates.
5. Bourassa never addresses the advantages of leverage and explores the opportunity to reach a levered capital structure to reduce the cost of equity.
6. As indicated in A19 from the Bourassa report, Bluefield Water Works requires "efficient and economical management" in order that fair returns be realized.
7. In A18, page 12, Bourassa indicates "An important component of financial risk is construction risk. Construction risk refers to the magnitude of a company's capital budget. If a company has a large construction budget relative to internally generate cash flows it will require external financing". He does not indicate however the fact that no analysis was performed prior to expansion of the GWC plant and equipment and that the company has not been **prudent** in its expansion efforts.
8. In A13, page 8 of Bourassa answers, he indicates the fact that the Economy had slowed with negative growth in the last quarter in 2007. GWC as indicated previously pushed ahead in its expansion.

III. SUMMARY OF SCHEDULES

a. **Folder-A Rate Comparison to Surrounding Areas**

b. **Folder-B Burst of Housing Bubble**

c. **Folder-C Equivalent Housing Units**

d. **Folder-D Other Information**

e. **Folder-E AWWA Manual – Water Rates, Fees and the Legal Environment.**

f. **Folder-F Average Market Returns**

g. **Folder-G Cost of Capital**

h. **Folder-H Goodman Water Expansion Plans**

APPENDIX - A

FOLDER-A, RATE COMPARISON TO SURROUNDING AREAS

Water Infrastructure Finance Authority of Arizona

2009

Water and Wastewater
Residential Rate Survey for the State of Arizona

Water Infrastructure Finance Authority of Arizona
1110 West Washington, Suite 290
Phoenix, Arizona 85007
Telephone: 602.364.1310
Toll Free: 877.298.0425
Website: www.azwifa.gov

System Name	Number of Users	Total $ /Month 7,500 Gals
303 DWID	26	$41.50
A. Peterson Water Co.	46	$31.90
Abra Water Co. Inc.	625	$30.14
Adaman Mututal Water Co.	261	$15.50
Aguila Water Services, Inc.	319	$49.48
Ajo DWID	142	$47.30
Ajo Improvement Co. - Water Div.	1,117	$30.09
Alpine Water System, Inc.	205	$55.55
American Ranch DWID	NR	$53.20
Antelope Lakes Water Company	2	$30.00
Antelope Run Water Company	245	$7.50
Antelope Water Company	63	$21.25
Antelope Water Company - Yarnell	237	$92.53
Anway Manville LLC Water Co.	240	$56.25
Apache Junction Water Utilities CFD	3,748	$40.04
Appaloosa Water Company	236	$41.25
Arivaca Townsite Coop Water Co.	123	$12.38
Ashcreek Water Company	105	$35.03
Ashfork Water Service	212	$41.04
Aubrey Water Company	333	$27.88
Avondale	22,892	$17.88
Avra Water Cooperative, Inc.	2,556	$44.79
AZ -American Water Co. - Agua Fria	36,453	$31.71
AZ -American Water Co. - Anthem	8,615	$32.13
AZ -American Water Co. - Havasu	1,637	$43.43
AZ -American Water Co. - Mohave	15,666	$17.24
AZ -American Water Co. - Paradise Valley	4,770	$33.53
AZ -American Water Co. - Sun City	22,768	$16.13
AZ -American Water Co. - Sun City West	15,379	$34.77
AZ -American Water Co. -Tubac	587	$43.90

System Name	Number of Users	Total $ /Month 7,500 Gals
AZ Water Company - Ajo	679	$59.29
AZ Water Company - Ajo Heights	688	$59.29
AZ Water Company - Apache Junction	19,257	$34.06
AZ Water Company - Bisbee	3,410	$35.78
AZ Water Company - Casa Grande	22,585	$24.36
AZ Water Company - Coolidge	4,582	$24.37
AZ Water Company - Lakeside	4,956	$49.24
AZ Water Company - Miami	3,030	$38.99
AZ Water Company - Oracle	1,526	$56.70
AZ Water Company - Overgaard	4,123	$51.85
AZ Water Company - Pinewood	2,879	$48.14
AZ Water Company - Rim Rock	1,226	$51.58
AZ Water Company - Saddlebrook	51	$45.75
AZ Water Company - San Manuel	1,496	$43.25
AZ Water Company - Sedona	6,309	$31.36
AZ Water Company - Sierra Vista	2,915	$27.49
AZ Water Company - Stanfield	204	$37.42
AZ Water Company - Superior	1,283	$35.80
AZ Water Company - White Tank	1,880	$38.16
AZ Water Company - Winkelman	160	$21.47
Baca Float Water Company	271	$29.50
Bachmann Springs Utility Company	2	$38.75
Beardsley Water Company, Inc.	423	$37.21
Beaver Dam Water Company, Inc.	303	$26.25
Beaver Valley Water Company, Inc.	192	$13.65
Bella Vista Water Company, Inc.	8,520	$25.00
Bellemont Water Co.	5	$42.83
Benson	1,914	$20.50
Bermuda Water Company	7,672	$20.99
Berneil Water Company	529	$8.20

System Name	Number of Users	Total $ /Month 7,500 Gals
Biasi Water Company, Inc.	149	$37.50
Bidegain Water Company	NR	$19.73
Big Park Water Company	3,022	$33.34
Black Canyon DWID	830	$35.00
Blue Hills No. 3	64	$41.25
Bonita Creek Water Co.	43	$86.00
Bowie DWID	350	$35.00
Boynton Canyon Enchantment HOA	101	$53.63
Bradshaw Mountain View Water Co.	575	$32.92
Bradshaw Water Company, Inc.	168	$71.13
Brooke Water LLC - Holiday Harbor	222	$46.38
Brooke Water LLC - Lakeside	851	$46.38
Brooke Water LLC - Marina Village	226	$46.38
Brooke Water LLC - Movalya Keys	551	$46.38
Brooke Water LLC - Parker Dam	187	$46.38
Brooke Water LLC - Payson	1,118	$34.19
Brooke Water LLC - Pine Water Co.	2,011	$52.88
Brooke Water LLC - Rio Lindo	31	$46.38
Brooke Water LLC - Strawberry Water Co.	1,062	$52.88
Brooke Water LLC - Tonto Basin	799	$30.36
Brooke Water LLC -Parent Co.	2,182	$46.38
Buckeye (Sundance)	incl	$34.78
Buckeye (Sunora)	incl	$17.43
Buckeye (Town)	10,998	$31.82
Caballeros Water Company, Inc.	50	$15.50
Cactus-Stellar Limited (May-Sept)	16	$34.50
Cactus-Stellar Limited (Oct - April)	16	$22.50
Camp Verde Water System	1,461	$48.88
Carefree Water Company	1,800	$57.28
Carter's Water Company	13	$20.00

System Name	Number of Users	Total $ /Month 7,500 Gals
Casa Grande South Water Co.	70	$29.83
Casa Grande West Water Co.	283	$24.60
Cave Creek Water Company	2,513	$74.38
C-D Oasis Water Company	11	$32.40
Cedar Grove Water	368	$41.13
Cerbat Water Company	279	$31.88
Chandler (Summer)	73,600	$19.31
Chandler (Winter)	73,600	$19.31
Chaparral City Water Company	13,345	$29.98
Chaparral Water Company	335	$26.55
Chino Meadows II Water Company	889	$39.03
Chino Valley	18,443	$34.39
Chloride DWID	188	$89.00
Cienega Water Company, Inc.	68	$67.50
Circle City Water Company, L.L.C.	186	$21.48
Citrus Park Water Co., Inc.	19	$31.25
Clarkdale	1,780	$49.50
Clay Springs DWID	151	$43.70
Clear Springs Utility Co., Inc.	588	$24.88
Clearwater Utilities Company, Inc.	832	$32.78
Clifton 06-002 - Morenci Water and Electric	709	$17.34
Cloud Nine Water Company Inc.,	52	$14.88
Coldwater Canyon Water Company	399	$18.60
Colorado City	902	$30.25
Community Water Co. of Green Valley	9,997	$22.94
Congress DWID	731	$54.50
Cordes Lakes Water Co.	1,342	$29.85
Cottonwood	8,968	$35.85
CP Water Company	16	$6.25
Cross Creek Ranch Water Company	13	$56.00

System Name	Number of Users	Total $ /Month 7,500 Gals
Dateland Public Service	110	$34.75
Dateland Water	15	$25.00
Dells Water Company	75	$24.38
Desert Hills Water Co., Inc.	1,697	$74.38
Desert Valencia Water System	11	$11.75
Diablo Village Water Company	871	$42.50
Diamond Valley Water Users	631	$71.05
Diversified Water Utilities, Inc.	1,361	$54.88
Doney Park Water (summer)	3,340	$57.53
Doney Park Water (winter)	3,340	$53.20
Double R Water Distributors, Inc.	NR	$26.20
Douglas	5,491	$17.59
Dragoon Water Co., Inc.	137	$66.05
DS Water Company	89	$35.97
Duncan	331	$32.19
Duncan - Hunter Estates	55	$32.19
Eagar	1,931	$20.74
Eagletail Water Company, LC	56	$49.73
East Slope Water Company	822	$17.55
Eden Water Company,Inc.	126	$36.00
Ehrenberg Improvement Assoc.	295	$24.35
El Mirage	11,369	$36.30
El Prado Water Co, Inc.	137	$32.68
Elfrida Domestic Water Users Assoc.	227	$18.25
Eloy	2,651	$25.71
Empirita Water Company, LLC	30	$54.38
Escapees at North Ranch	410	$21.00
F & F Water Company	NR	$5.88
Far West Water & Sewer, Inc.	14,930	$27.81
Farmers Water Company	1,955	$16.38

System Name	Number of Users	Total $ /Month 7,500 Gals
Fisher's Landing Water & Sewer Works	79	$12.00
Flagstaff	18,792	$30.51
Flagstaff Ranch Water Company, Inc.	218	$46.18
Florence	3,955	$26.88
Flowing Wells Irrigation	3,390	$25.50
Fools Hollow Water Company	318	$33.88
Forest Highlands Water Company	722	$54.80
Forest Lake DWID	870	$40.00
Fort Mohave Tribal Utilities Authority	862	$21.00
Francesca Water Co., Inc.	131	$24.35
Fredonia	719	$23.13
Gadsden Water Co., Inc.	196	$14.50
Gila Bend	651	$24.30
Gilbert	69,341	$22.73
Glendale	60,958	$23.59
Globe	3,512	$25.45
Golden Corridor Water Co.	52	$34.75
Golden Shores Water Co., Inc.	1,495	$25.88
Golden Valley DWID	1,528	$36.13
Goodman Water Co.	628	$78.69
Goodyear	12,604	$21.12
Graham County Utilities Inc. - Water	1,203	$35.93
Grand Canyon Caverns & Inn	9	$21.25
Grandview Water Co., Inc.	20	$5.00
Granite Dells Water Co.	12	$14.05
Granite Mountain Water Co., Inc.	96	$53.00
Granite Oaks Water Users Assoc.	452	$31.00
Green Acres Water Company	52	$84.88
Green Valley DWID	4,606	$29.60
Greenehaven Water Co., Inc.	261	$18.75

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System Name	Number of Users	Total $ /Month 7,500 Gals
Groom Creek Water Users Assoc.	228	$38.75
H2O, Inc.	6,668	$26.57
Halcyon Acres Annex #2 Water Co.	35	$29.05
Halcyon Acres Water Users Assoc.	77	$10.00
Hatch Valley Water Company	70	$30.63
Havasu Heights DWID	145	$19.13
Hayden	275	$9.63
Heber Domestic DWID	345	$33.75
Heckethorn Water Company	44	$43.40
High Country Pines Water Company	199	$47.63
Highland Pines DWID	349	$201.78
Hillcrest Water Company	197	$37.50
Holbrook -Summer	1,847	$18.13
Holbrook -Winter	1,847	$19.63
Holiday Hills DWID	49	$87.50
Holiday Water Company	157	$29.10
Ho-Tye Water Company	3	$40.88
Huachuca City	775	$21.00
Humboldt Water Systems, Inc.	326	$37.80
ICR Water Users Assoc.	375	$38.20
Indiada Water Company, Inc.	56	$34.25
J.N.J. Enterprises L.L.C.	258	$50.38
Jackson Acres Water District	15	$20.00
Jackson Spring Estates HOA	14	$23.00
Jake's Corner Water System	19	$24.03
Jerome	305	$25.94
Johnson Utilities Company	16,414	$44.00
Joshua Valley Utility Company	995	$40.25
Katherine Resort Water Company	46	$54.73
Kearny	841	$29.70

System Name	Number of Users	Total $ /Month 7,500 Gals
Keaton Development Company	496	$38.50
Kingman	18,519	$26.89
Kohl's Ranch Water Company	123	$7.00
Kokopelli Springs Resort	40	$21.80
La Casita Water Company, Inc.	441	$47.25
Lago Del Oro Water Company	6,046	$22.30
Lagoon Estates Water Company, Inc.	385	$27.25
Lake Havasu City	28,864	$18.70
Lake Verde Water Company	63	$23.50
Lakewood Water Company	302	$20.90
Las Quintas Serenas Water Company	1,019	$29.20
Lazy C Water Service	133	$43.59
Litchfield Park Service Company -Water	15,293	$15.95
Little Park Water Company	68	$28.00
Livco Water Company	373	$28.25
Loma Estate Water Co.	31	$64.00
Loma Linda Water Company	126	$38.61
Lord Arizona Water Systems Inc.	337	$38.12
Los Cerros Water Co., Inc.	816	$30.80
Lucky Hills Water Company	4	$36.38
Lyn-Lee Water	41	$29.63
Mammoth	580	$25.00
Marana	5,284	$32.52
Marana DWID	837	$40.28
Maricopa DWID	383	$33.00
Mayer DWID	575	$43.50
McAdams Water Company	6	$34.25
McNeal Water Company (MWC, Inc.)	25	$43.35
Mesa	134,567	$28.73
Mesaland Water Company	97	$16.20

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System Name	Number of Users	Total $ /Month 7,500 Gals
Mescal Lakes Water Systems, Inc.	553	$42.75
Metropolitan DWID (Tucson)	18,230	$32.66
Michael's Ranch Water User's Assoc.	24	$51.53
Mile Post 54 Community Water Well	15	$20.00
Mirabell Water Company, Inc.	61	$39.63
Mohawk Utility Company	137	$29.00
Monte Vista Water Co., L.L.C.	40	$11.50
Montezuma Rimrock Water Co., LLC	206	$43.61
Morenci Water and Electric Company	1,275	$18.73
Mormon Lake Water Co.	140	$101.73
Morristown Water Company	50	$32.50
Mountain Dell Water, Inc.	86	$46.63
Mountain Glen Water Service (consol.)	385	$44.85
Mt. Lemmon DWID	290	$97.35
Mt. Tipton Water Co.	691	$50.00
Naco Water Company, L.L.C.	373	$76.47
Navajo Water Co., Inc.	318	$42.44
New River Utilities Company	2,741	$16.50
Nogales	5,344	$18.38
North Mohave Valley Corporation	1,883	$25.30
Northern Sunrise Water Company	353	$47.87
Oak Creek Public Service Co.	311	$27.15
Oak Creek Utility Corporation	34	$56.70
Oak Creek Water Co., No. 1	694	$21.34
Ojo Bonito Estates DWID	32	$41.50
Orange Grove Water Company	314	$21.00
Oro Valley	18,401	$31.09
Page	2,932	$20.78
Papago Butte DWID, IWDD	166	$34.25
Paradise Trails Pioneer Valley	29	$26.20

System Name	Number of Users	Total $ /Month 7,500 Gals
Park Valley Water Company	510	$33.88
Park Water Company, Inc.	129	$39.30
Parker	1,173	$23.13
Parker Lakeview Estates HOA. Inc.	40	$55.10
Patagonia	400	$19.58
Payson	7,703	$36.35
Peeples Valley Water Company	218	$50.08
Peoria	48,234	$29.53
Phoenix - Spring & Fall Rates	402,926	$15.74
Phoenix - Summer rates	402,926	$7.71
Phoenix - Winter Rates	402,926	$14.21
Picacho Peak Water Company	14	$44.76
Picacho Water Company	147	$37.50
Picacho Water Improvement	136	$22.25
Pima Utility Company	10,150	$11.68
Pine Valley Water Company	163	$49.36
Pine Water Assoc. DWID	60	$100.00
Pinecrest Water Company	37	$64.50
Pinedale DWID	136	$24.25
Pinetop Water Comm. Facilities Dist.	1,237	$39.59
Pineview Water Co.	1,133	$43.70
Poderosa Utility Company	539	$45.75
Ponderosa Park DWID	291	$87.04
Porter Mountain DWID	123	$33.45
Prescott	22,043	$34.53
Prescott Valley	17,997	$29.78
Pueblo Del Sol Water Company	5,062	$28.40
Q Mountain Mobile Home Park	219	$27.00
Q Mountain Water	449	$30.00
Quail Canyon DWID	NR	$75.85

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System Name	Number of Users	Total $ /Month 7,500 Gals
Quail Creek Water Company	1,585	$36.00
Quail Ridge DWID	NR	$51.25
Quartzsite	842	$26.50
Queen Creek Water Company	8,770	$20.45
Queen Valley DWID	575	$47.34
RAINDANCE WATER CO-OP	69	$42.63
Rancheros Bonitos Water Co., L.L.C.	38	$20.00
Rancho Del Conejo Water Co-Op	325	$26.25
Rancho Sahuarita Water Co. L.L.C.	4,515	$32.43
Ray Water Company	1,519	$22.78
Red Rock Utilities, LLC.	NR	$44.88
Ridgeview Utility Company	71	$50.58
Rigby Water Company (combined)	337	$22.50
Rillito Water Users Association	53	$10.75
Rim Trail DWID	88	$107.00
Rincon Ranch Estates Water Company	231	$36.40
Rincon Water Company	70	$57.50
Rio Rico Utilities Inc.	6,587	$18.16
Rio Verde Utilities - Water	1,652	$20.93
Roosevelt Lake Resort, Inc.	132	$46.10
Rose Valley Water Company	2,399	$15.98
Sabrosa Water Company	52	$98.00
Safford	7,524	$28.48
Saguaro Acres CFD	73	$29.08
Saguaro Water Company	976	$40.93
Sahuarita Water Company	5,102	$32.43
San Luis	4,738	$14.61
Sandario Water Company	359	$25.03
Santa Cruz Water Company	16,457	$41.90
Scottsdale	87,441	$37.05

System Name	Number of Users	Total $ /Month 7,500 Gals
Serviceberry Water Co. (Vernon Valley)	19	$44.50
Seven Canyons Water Co.	53	$83.75
Seven Ranches DWID	26	$33.00
Shepard Water Company	124	$21.60
Show Low	4,489	$27.24
Sierrita Mountain Water Company	77	$44.85
Signal Peak Water Company, Inc.	36	$28.00
Silverbell Irrigation & Drainage District	110	$36.13
Sitgreaves Water Company	70	$33.00
Sky-Hi DWID	130	$50.25
Sleepy Hollow Mobile Home Estates (s)	106	$14.32
Sleepy Hollow Mobile Home Estates (w)	106	$14.32
Snowflake	1,810	$27.04
SoHi DWID	223	$48.75
Solitude Trails DWID	47	$97.50
Somerton	2,897	$17.75
Sonoita Valley Water Company	97	$59.55
South Rainbow Valley Water Coop.	5	$22.50
Southern Sunrise Water Co	836	$47.87
Southern Water Corporation	38	$33.46
Southland Utilities Company, Inc.	625	$9.98
Spanish Trail Water Co.	396	$23.63
Springerville	766	$19.13
St. David DWID	526	$21.80
St. David Springs	3	$5.88
St. Johns	1,196	$20.25
Starlight Water Company, Inc.	671	$65.20
Sterling Water Company	NR	$33.25
Stoneman Lake Water Company, Inc.	74	$15.00
Sulger Water Company, #2	15	$18.20

System Name	Number of Users	Total $ /Month 7,500 Gals
Sun Leisure Estates Utilities Co., Inc.	57	$21.50
Sun Valley Farms -Unit VI Water Co.	225	$22.50
Sunizona Water Company	34	$33.13
Sunland Water Company	73	$9.63
Sunrise Vistas Utilities Company	666	$34.95
Sunrise Water Company	1,345	$32.75
Surprise	13,133	$31.39
T.K.Water Service	47	$30.85
Tacna Water Company	143	$20.36
Tall Pine Estates Water & Imp. Assoc. Inc.	71	$7.50
Taylor	1,254	$13.15
Tempe	35,877	$19.17
Thim Utility Co.	397	$34.50
Thim Water Corporation	74	$35.00
Thunderbird Farms WID	570	$24.00
Thunderbird Meadows	128	$50.16
Tierra Buena Water Company	126	$26.50
Tierra Linda Homeowners Assoc.	47	$44.33
Tierra Mesa Estates Water Company, Inc.	230	$23.00
Timberalnd Acres DWID	324	$39.25
Tolleson	1,563	$27.48
Tombstone	869	$38.46
Tonto Creek Utility Co.	71	$36.13
Tonto Hills Utility Co.	130	$102.90
Tonto Village Water Company	198	$12.83
Tortolita Water Co., Inc.	2	$55.90
Truxton Canyon Water Company, Inc.	1,056	$31.50
Tubac Water Company, Inc.	NR	$13.50
Tucson	223,614	$19.57
Turner Ranches Water & Sanitation	112	$49.02

System Name	Number of Users	Total $ /Month 7,500 Gals
Utility Source, LLC	332	$62.76
Vail Water Company	3,425	$45.58
Vail Water Company	3,425	$51.00
Valencia Water Co., Greater Buckeye Div.	652	$36.63
Valencia Water Company, Inc.	5,302	$34.45
Valle Verde Water Company	800	$21.50
Valley Pioneers Water Co., Inc.	2,314	$38.25
Valley Utilities Water Co., Inc.	1,403	$31.77
Valley View Water Company, Inc.	NR	$47.38
Verde Lakes Water Corporation	787	$20.45
Verde Lee Water Company	182	$35.25
Verde Santa Fe Water Company, L.L.C.	NR	$15.00
Vernon DWID	30	$40.25
Vernon Valley Water Company	19	$44.50
Villa Grande DWID	99	$51.23
Virgin Mountain Utilities Corporation	1	$42.50
Viva Development Corporation	NR	$10.13
Voyager Water Company	1,027	$26.00
Walden Meadow Comm. Co-op	297	$42.00
Walnut Creek Water Company, Inc.	254	$26.00
Watco, Inc. (prev. Silver Well Svcs)	302	$49.00
Water Utility of Greater Buckeye, Inc.	616	$36.63
Water Utility of Greater Tonopah, Inc.	359	$48.25
Water Utility of Northern Scottsdale	75	$98.00
Wellton	908	$22.70
Wenden DWID	228	$37.99
West End Water Company	233	$42.60
West Village Water Company	55	$63.88
Whetstone DWID	372	$42.88
White Hills Water Co., Inc.	94	$87.25

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System Name	Number of Users	Total $ /Month 7,500 Gals
White Mountain Summer Homes WID	468	$56.70
White Mountain Water Company	195	$45.20
Why Utility Company, Inc.	90	$47.00
Wickenburg	2,418	$13.50
Wilhoit Water Company, Inc.	64	$41.25
Willcox	1,907	$26.42
Williams	2,712	$45.70
Willow Lakes Property Owners Assoc.	79	$41.88
Willow Valley Water Company	1,581	$24.50
Winchester Water Company, L.L.C.	137	$20.03
Winslow	3,022	$20.39
Winslow West Water Company, Inc.	10	$8.25
Woodruff DWID	62	$26.88
Woodruff Water Co., Inc. W-04264A	4	$39.24
Worden Water Company	24	$24.75
Yarnell Water Improvement Assn.	619	$53.08
Yavapai Country Club Water Company	36	$63.58
Yavapai Estates	95	$32.53
Yucca Water Association, Inc.	105	$17.50
Yuma	28,500	$29.86

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Folder - A Rate Comparison to Surrounding Areas, Rate Comparison Calculations.xlsx

Rate Comparison Analysis
Goodman Water

Goodman Rate per WIFA study (7,500 gallons) 78.69 (a.) Note, rate agrees with study so calculaitons are correct.

From Bourassa analysis of Rate Case file (Excerpt Below)
(Shed H-4, P1 [page 104 in PDF file])
Billing Rates Per Month

Usage	Present Bill	Proposed Bill
7000	$ 75.73	$ 116.90
8000	$ 81.64	$ 127.82
7500	$ 78.69 (a.)	[redacted] New Rate

Calculation is rate at 7,000 Gals + 1/2 difference between 8,000 Gals and 7,000 Gals.

TIES TO STUDY

New rate makes Goodman Water the most expensive in all of Arizona!!!

Goodman Water Company
Bill Comparison of Present and Proposed Rates
Customer Classification Residential 5/8x3/4 Inch Meter
Test Year Ended December 31, 2009
(Excludes all Revenue Related Taxes)

Exhibit
Schedule H-4
Page 1
Witness: Bourassa

Usage	Present Bill	Proposed Bill	Dollar Increase	Percent Increase
-	$ 42.20	$ 56.97	$ 14.77	35.00%
1,000	46.15	63.77	$ 17.62	38.17%
2,000	50.10	70.56	$ 20.46	40.84%
3,000	54.05	77.36	$ 23.31	43.12%
4,000	58.00	84.15	$ 26.15	45.09%
5,000	63.91	95.07	$ 31.16	48.75%
6,000	69.82	105.98	$ 36.16	51.80%
7,000	75.73	116.90	$ 41.17	54.36%
8,000	81.64	127.82	$ 46.18	56.56%

Present Rates:

Monthly Minimum:		$	42.20
Gallons in Minimum			-
Charge Per 1,000 Gallons			
Up to	4,000	$	3.95
Over	9,000	$	5.91
Over	9,000	$	7.11

H-4 P1

FOLDER B - BURST OF HOUSING BUBLE
- THE BUBLE STARTS TO BURST

The Housing Bubble Starts to Burst

The Housing Bubble Starts to Burst

By Dean Baker

truthout | Columnist

Tuesday 06 March 2007

Is there anything as beautiful as the sound of surprised economists in the springtime? I haven't had this much fun since the NASDAQ started to deflate seven years ago.

Okay, enough of the gloating; while the collapse of the housing bubble was both predictable and inevitable, it is not pretty. Tens of millions of people will be hurt as they see much of the equity in their homes - money that most had counted on to support their retirement - disappear. Millions more will be forced out of their homes as they find that they are unable to meet the payments on adjustable rate mortgages that reset at higher rates. People who had worked hard and saved in order to become homeowners will see their dream disappear.

The timing and process of the unwinding of the bubble cannot be known, but the basic story is clear. Investors are finally realizing that the high-risk mortgages they have been holding are high-risk.

Mortgage brokers, who make their money on issuing mortgages, not holding them, had been anxious to get as many people as possible to buy mortgages. While old-fashioned bankers would demand large down payments and good credit histories, many mortgage brokers were happy to issue mortgages that they knew buyers could not pay off. Since the brokers dump their mortgages in the secondary market almost immediately after

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with low "teaser rates" that were often several percentage points below the market rate to which the loan would eventually reset. Many homebuyers who could meet their monthly payment on a mortgage with a 1.5 percent interest rate would be hopelessly over their heads when the mortgage reset to a 6.5 percent rate.

But, everything was fine, as long as home prices continued their rapid appreciation. If a homebuyer's income wasn't high enough to make the mortgage payment, the homebuyer could draw on the new equity created by a rising home price. As a result, delinquency and foreclosure rates remained low through 2004 and 2005, even as the number of high-risk mortgages soared.

However, the party began to end last year as house prices started to fall. The fall thus far has been relatively modest (around 3 percent nationwide), but with prices going in the wrong direction, most new homebuyers have no equity that they could rely upon to meet their monthly payments. As a result, delinquency rates began to soar in 2006. More than 10 percent of the subprime adjustable rate mortgages issued last year (the most risky category) were already seriously delinquent or foreclosed within 10 months of issuance. This is even before any of these mortgages reset to a higher interest rate.

With foreclosure rates soaring, the music is about to stop. The investors who bought up these mortgages in the secondary market are now refusing to lend more money. Credit is drying up for both the subprime and the Alt-A market, which is a notch above subprime in creditworthiness. These two segments of the housing market together accounted for 40 percent of the mortgages issued in the last two years.

If 40 percent of potential homebuyers suddenly have problems getting credit, it has to have a large impact on the housing market. Throw into the mix that the inventory of unsold homes is 25 percent higher than at the same time last year. And, the number of vacant units up for sale (normally an indication of a highly motivated seller) is up more than 40 percent compared to last year. Since house prices fell by three percent last year (six percent in real terms), it looks like we have the beginnings of a serious slide in house prices. And, a sharp fall in house prices will lead to more problems in the mortgage market.

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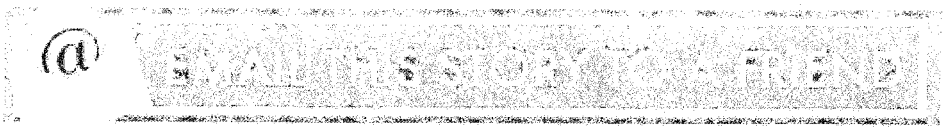
afford. And the mortgage brokers made a fortune selling bad mortgages.

That is the way the US economy works these days. Those who mess up the economy do well, while their victims - in this case millions of moderate-income homebuyers who will lose their homes - pay the price for the experts' mistakes.



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THE WALL STREET JOURNAL.
WSJ.com
JULY 1, 2009, 7:35 P.M. ET

FOLDER - B
WALL STREET JOURNAL - HOUSING BUBBLE

A Government Failure, Not a Market Failure

The housing bubble was a fully rational response to a set of distortions in the free market—distortions created primarily by the public sector.

As a people we need, at all times, the encouragement of home ownership.
--HERBERT HOOVER, 1932

The idea that home ownership confers special benefits on American society is deeply embedded in our culture—so much so that our national tax policy confers a special benefit of its own on it. Home ownership is granted an advantage over all other forms of ownership in the form of an enormous deduction on the interest payments most individuals incur in financing their homes. Nothing else in the tax code comes anywhere near that deduction in scope or size. We have decided, as a nation, that home ownership is not only a good thing for an individual or a family, but that it is beneficial for the public at large and the country as a whole. Otherwise, why would it be necessary for the government to give it this kind of preferential treatment? Without it, clearly, we believe that the national rate of home ownership would be lower, and that a lower rate of home ownership would be deleterious to our common weal.

After 2000, the national push toward home ownership intensified in three dimensions, leading to a doubling of housing prices in just five years' time. First, the Federal Reserve Board's interest-rate policy drove down the cost of borrowing money to unprecedented lows. Second, a common conviction arose that home ownership should be available even to those who, under prevailing conditions, could not afford it. Finally, private agencies charged with determining the risk and value of securities were exceptionally generous in their assessment of the financial products known as "derivatives" whose collateral resided in the value of thousands of mortgages bundled together. The rating agencies understated the risks from these bundled mortgages by assuming that home prices were simply going to rise forever.

Commentary

When the housing bubble burst in 2006, the damage to the financial system pushed the global economy into the worst contraction since the Great Depression. In the midst of the pain and suffering that have accompanied financial collapse and economic contraction—over $15 trillion in wealth has been lost by American households alone while, to date, more than 6 million job losses have boosted the unemployment rate to 9.4 percent—much of the blame has been placed on unregulated financial markets whose behavior is said to have revealed a terrible flaw in the foundation of capitalism itself.

This was a market failure, we are told, and the promise of capitalism has always been that the self-correcting mechanisms built into the system

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THE WALL STREET JOURNAL.
WSJ.com

would preclude the possibility of a systemic market failure.

But the housing bubble only burst after government subsidies pushed house prices up so fast that marginal buyers could no longer afford to chase prices even higher. A bubble created by rigged financial markets and a government-sponsored obsession with home ownership is not a result of market failure, but rather, a result of bad public policy. The belief that home ownership, per se, is such a benefit that no amount of government support could be too great and no pace at which home prices rise could be too fast is the root of the crisis.

There was no market failure.

According to The New Palgrave Dictionary of Economics, an invaluable collection of precise summaries of virtually every topic in the dismal science: "The best way to understand market failure is first to understand market success, the ability of a collection of idealized competitive markets to achieve an equilibrium allocation of resources which is Pareto optimal." Allow me to translate. "Pareto optimality," a term named after the Italian economist Vilfredo Pareto (1848–1923), is defined as an allocation of economic resources that produces the greatest good. Thus, if one changes the allocation of resources away from "Pareto optimality" for the purpose of making someone better off, that change will make someone else worse off. Economists have expended a great deal of effort to demonstrate that free and competitive markets produce an outcome that is "Pareto optimal."

This is not to say that there is no such thing as market failure. There are many instances of market failure. Someone may possess information that others do not, as in insider trading, and thereby gain an illegitimate leg up. There may be too few players in a given market, which allows them to manipulate, hoard, and toy with prices. Capricious government intervention in cases where it is neither required nor appropriate constitutes another condition that may create a market failure.

There are also cases of market failure in which some people get a free ride while others bear a disproportionate burden. This is the case in national defense, for example, in which soldiers bear a burden non-soldiers do not. Consequently, a government subsidy for national defense is necessary for the maintenance of security and power, and the overwhelming majority of citizens acknowledges it and does not complain about it. National defense is a public good, perhaps the original public good.

Owner-occupied housing is something else that has been deemed a public good. Herbert Hoover's affirmation of the need for encouragement of home ownership "at all times" came in 1932 at the fiercest stage of the Great Depression. Others have made powerful arguments that homeowners make better citizens and contribute to stable communities. Why renters do not and cannot offer the same contribution to the public good is never specified, but existing homeowners, homebuilders, mortgage lenders, and mortgage servicers have all seized on the idea that subsidizing home ownership is "Pareto optimal."

It isn't.

Subsidies for home ownership—in the form of full deductibility of mortgage interest, lower mortgage borrowing rates derived from government guarantees for mortgage lenders like Fannie Mae and Freddie Mac, and deductibility of local real-estate taxes—have long benefited those who own homes at the expense of those who do not. The size and severity of the burst bubble makes a mockery of the argument that the disproportionate gains to homeowners also improved the welfare of renters. By erasing, in just a few years, nearly one-third of the wealth on the national balance sheet, the collapse has created a substantial loss in national welfare, including for renters.

Home ownership should not be considered a public good deserving of government subsidies even without the bubble collapse for a simple reason: Those who receive the subsidy get to capture the benefits in the form of home prices that are higher than they would otherwise be without government support. The subsidies make homeowners better off while they make renters worse off. They are, therefore, not Parieto

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optimal.

In addition, home-ownership subsidies are inherently unjust. They favor the relatively well-o ff at the expense of those who are poorer. Why? Because the value of an owned home and the size of the government subsidy both grow as income increases. A tax deduction tied to home ownership for a well-to-do American with a $1 million mortgage and a $60,000 annual interest payment is worth $22,000 (assuming the American is in the 35 percent tax bracket). The higher the marginal tax rate rises, the more valuable the mortgage-interest deduction is to the homeowner. For a family with a modest income that may pay little or no income tax, the mortgage-interest deduction is worth virtually nothing. And yet, for the past 15 years, even the party in the United States most associated with preferential treatment for the poor began preaching the evangel of home ownership as a form of class salvation.

During Bill Clinton's first term, government housing policy changed substantially. After decades in which liberal politicians and thinkers devoted themselves to arguments for expanding the number of public-housing units, the disastrous condition of those units led the President, a "new Democrat," to a dramatic ideological shift in emphasis. No longer would public housing be at the top of the liberal Democratic agenda. Instead, borrowing from conservative ideas about the inestimable benefit of home ownership to the striving poor, the Clinton administration and members of his party in the House and Senate decided to use government power to achieve that aim.

In 1994, the "National Homeownership Strategy" of the Clinton administration advanced "financing strategies fueled by creativity to help homeowners who lacked the cash to buy a home or the income to make the down payments" to buy a home nonetheless. It became U.S. government policy to intervene in the marketplace by lowering the standards necessary to qualify for mortgages so that Americans with lower incomes could participate in the leveraged purchases of homes.

The goal of expanding home ownership led to the creation of new mortgage subsidies across the board. The loosening of standards became the policy of Fannie Mae and Freddie Mac, the pseudo-private "government-sponsored enterprises" that bought mortgages from originating lenders. A particular change in the tax law in 1997 encouraged many households to make buying and improving a home the primary vehicle by which they enhanced net worth. By eliminating any capital-gains tax on the first $500,000 of profits from the sale of an owner-occupied residence once every two years, Washington encouraged enterprising American families to purchase homes, fix them up, re-sell them, and then repeat the process. Flipping became a financial pastime for millions because this special advantage created a new incentive—which didn't exactly fit the model of encouraging people to remain in a stable home for many years and thereby help to stabilize the neighborhood around them.

There was, however, a rival to home ownership as a way of building wealth in the late 1990s—the run-up in the stock market, which was caused by another bubble, this one in the technology sector. Given the size of the gains in the stock market, which were running 20 percent or more a year, the relative desirability of home ownership eroded. But when, in 2000, the tech bubble burst, households were left in search of an alternative way to store and enhance wealth. Home ownership emerged as the most promising alternative. After 2000, and especially after 2002, U.S. real house prices began to surge.

Everything I have described thus far constituted a necessary but not sufficient precondition for a full-fledged housing bubble. It took the addition of a new market in derivatives to drive bankers, lenders, and credit agencies to create the conditions for an implosion by expanding mortgage financing to borrowers who could not possibly afford the homes they were purchasing.

In February 2003, Angelo Mozilo, then head of the major mortgage supplier called Countrywide, declared that the need to provide a down payment should no longer be an impediment to home ownership for any American.\

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004400650073006b0074006f0070002f004d0061-
006b0069006e002e00680074006d006c00000006-
00000066006f006f00740031000000 Was it any wonder that a home-buying frenzy occurred when Countrywide's chieftan was suggesting that there was no need for a purchaser to supply even a minimal equity stake in his purchase? During 2004 and 2005, the rise in home prices accelerated. That, in turn, caused Americans to refinance their homes to remove their equity—their accumulated wealth, in other words—and convert it into disposable income. They did so because they were confident the equity would simply be recreated by continued growth in the value of their homes.

The hunger for more mortgages that could serve as backing for more new securities led to the acceleration of undocumented, no-down-payment, negative-amortization mortgage loans to individuals with virtually no prospect of servicing them. The designers of derivative securities effectively collaborated with the rating agencies, such as Standard & Poor's and Moody's, that were relied upon (often through government mandate) by pension funds and other gigantic repositories of wealth with identifying the securities safe enough to invest in.

A situation in which creators of derivatives provide the monetary compensation for the very agencies that are tasked with determining the riskiness of their securities hardly constitutes a competitive market. Indeed, it constitutes dangerous collusive behavior. But that collusion, again, was made possible by the distorting actions of government agencies, which effectively provided a subsidy for risk-taking that was, by definition, unsustainable.

It is fair to ask, in the light of past bubbles that have burst—like the entire economy of Japan in the 1990s and the tech-stock tragicomedy—why investors were prepared to take on the substantial risks tied to unfamiliar derivative securities whose value was tied to the continued rise in house prices. A substantial part of the answer lies with the Federal Reserve Board. It deliberately adopted a policy that it would not seek to identify bubbles and then to act in ways that would let the air out slowly. Instead, Fed Chairman Alan Greenspan allowed bubbles to inflate and then stepped in to repair any damage afterward. This constituted a substantial subsidy to excessive risk-taking.

The policy became clear in 1998, the year in which the unwinding of the Asian currency crisis together with Russia's defaulting on its debt created huge volatility in the credit markets. At the time, Long Term Capital Management, a hedge fund, was on the verge of collapse, and an aggressive intervention was staged to save it. The New York Fed provided its offices and encouragement to bring financial firms together to contain it.

The salvation of Long Term Capital Management suggested a new reality for the marketplace: Aggressive risk-taking in pursuit of huge profits was manageable even if bubbles were created, just so long as the Fed was around to raise the "systemic risk flag" in the event of serious trouble. There would always be a rescue; the trick was to get out before everything began to collapse. It was this fact that led Charles Prince, then the head of Citicorp, to give the game away in July 2007 about the reckless and imprudent nature of his bank's conduct. "When the music is playing," Prince said, "you've got to get up and dance."

The housing bubble was thus a fully rational response to a set of distortions in the free market—distortions created primarily by the public sector. The heads of large financial institutions, as Prince's remark suggested, recognized the risk-taking subsidy inherent in public policy, but felt they had no choice but to play along or fall behind the other institutions that were also responding rationally to the incentives created by government intervention.

The housing collapse and its painful aftermath, including that $15 trillion wealth loss for U.S. households (so far), do not, therefore, represent a market failure. Rather, they represent the dangerous confluence of three policy errors: government policy aimed at providing access to home ownership for American households irrespective of their ability to afford it; the Fed's claim that it could not identify bubbles as they

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were inflating but could fix the problem afterward; and a policy of granting monopoly power to rating agencies like Standard & Poor's, Moody's, and Fitch's to determine the eligibility of derivative securities for what are supposed to be low-risk portfolios, such as pension funds.

The Fed's bubble policy has evolved in a constructive direction since the bursting of the U. S. housing bubble. The trauma of dealing with the aftermath, including the fire sale of the investment bank Bear Stearns and the outright failure of Lehman Brothers, has convinced the Fed that more effort should be directed toward identifying bubbles before they grow too large.

Now the collusive relationship between rating agencies and creators of derivative securities needs to be ended by bringing more market discipline to the process. Free entry into the rating business should be permitted. The monopoly of a small number of rating agencies to determine the eligibility of new securities for investment by massive pension funds is unjustifiable. The practice whereby the creators of such derivative securities compensate the rating agencies for the ratings also needs to be ended.

Alas, the federal government's response to the collapse of the housing bubble has been deeply problematic. It has chosen to provide additional subsidies to homeowners while nationalizing the government-sponsored enterprises, Fannie Mae and Freddie Mac, that helped to subsidize lower mortgage-interest rates While the extreme distress visited on American households by the collapse of the housing bubble certainly needs some alleviation, over the longer run we must have a serious national debate on the question of the degree to which we still want to consider home ownership a public good.

The long-term solution is for government to stop playing favorites, as it has for decades with housing. Home ownership should neither be penalized nor favored under government policy. We have seen how that distortion led inexorably to a degree of wealth destruction we have not seen in our lifetimes. The distortion of the market introduced by government intervention can and must be brought to an end. The market that would take its place after this dramatic and admittedly difficult change would allow Americans to allocate their resources more effectively. It would no longer create an unjust advantage for the wealthy homebuyer. And it would, finally, make it possible for Americans to see their homes as they should be seen—not as investment vehicles, but rather, as the places they live in, the hearthstones of their families.

John H. Makin is a visiting fellow at the American Enterprise Institute and a principal at Caxton Associates.

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FOLDER-C EQUIVALENT HOUSING UNITS GWC RESPONSE TO INTERVENO DR-3

GOODMAN WATER COMPANY, INC.'s RESPONSES TO INTERVENOR'S THIRD SET OF DATA REQUESTS
DOCKET NO. W-02500A-10-0382
MARCH 7, 2011

3.01 Please provide a narrative and details on Goodman Water Company's total water works capacity in terms of Equivalent Development/Dwelling Units (EDU's) in the Eagle Crest Ranch development.

RESPONSE: Attached as Appendix "A" is a copy of a "worksheet" previously prepared by WestLand Resources, Inc. which outlines the "Planning and Design Criteria EDU's," which were used in connection with the design of the water system for the Eagle Crest Ranch subdivision.

3.02 Please provide the dates for the earliest date of water service provided to lot numbers 478 to 590 and separately for lot numbers 591 to 617.

RESPONSE: The Company's records indicate that the earliest date for the physical delivery of water service to lots located within (i) lot numbers 478 to 590 and (ii) lot numbers 591 to 617 was February 22, 2007 in each instance.

3.03 Please provide a narrative of the extent of damage to the Goodman Water System that resulted from the recent cold weather. Indicate what water plants were affected, equipment that failed, estimated water lost to leakages, dates and time the failures occurred, time frame for when failure occurred and repairs were completed and associated costs for repairs.

RESPONSE: This information will be provided, when fully compiled, as a supplement to the Company's Responses to this Third Set of Data Requests.

3.04 Please provide a narrative for addressing the attached Water Plant #4 Upgrade for boosting Water Pressure to meet a Fire Flow Capacity of 1,600 GPM for the K Zone that was approved for Construction by the ADEQ on 5/26/04. Include (a) what entity requested the upgrade, (b) what was the total cost of the upgrade, (c) confirm the upgrade was constructed and installed in Water Plant #4, (d) Date the installation was completed and put in service.

RESPONSE: Attached as Appendix "B" are copies of (i) a September 2003 communication from Golder Ranch Fire District to D.R. Horton Homes and (ii) a June 28, 2004 communication from Golder Ranch Fire District to D.R. Horton Homes. These documents indicate that the subject upgrade at Water Plant #4 was occasioned by a 1,500 GPM fire flow capacity requirement enforced by the Golder Ranch Fire District against

Planning Demand Criteria

Platted EDU's = 959

Residential person per housing unit (pphu) = 2.8

Demand per person = 125 gallons per capita per day (gpcd)

Planned Commercial = 83 Acres

Demand per Acre = 1,400 gallons per acre per day (gpad)

Commercial EDU's = 83 Acres x 1,400 gpad = 116,200 gallons / 125 gpcd / 2.8 pphu = 332 EDU's

Total EDU's at Buildout = 959 + 332 = 1,291

Storage Capacity Criteria (from master plan), ADD + fire flow plus 15%

Fire Flow = 2,000 gpm for 2 hours = 240,000 gallons

Well Capacity Criteria PDD

Booster Capacity = PDD + FF

Water Plant No. 1

Total Storage = 400,000 gallons

Fire Flow = 1,000 gpm for 2 hours (residential only) = 120,000 gallons

Available Storage = 280,000 gallons, 800 edus

Well No. 1 = 500 gpm, 1029 edu's

J- Zone Booster Station = 2,000 gpm

Well No. 2

800 gpm, 1646 edu's

Another important rate design issue is referred to as unfair takings. Claims of unfair takings have repeatedly been made in the context of impact fees.[2] This issue is addressed in the following US Supreme Court rulings: *Nollan v. California Coastal Commission* of 1978, which is often described as the seminal essential nexus case; and in *Dolan v. City of Tigard, OR*, 1994, which contains a ruling on the rough proportionality test. The third of these cases is the 2001 Colorado Supreme Court ruling in *Krupp v. Breckenridge Sanitation District*. These three cases on unfair takings and impact fees will be further discussed in later chapters. The 2001 Colorado court ruling lays a useful foundation for fair and equitable impact or tap fees. It established a strong cost-of-service (COS) relationship between financial planning objectives, such as growth-pays-for-growth and the buy-in method, consisting of reimbursement and new capacity cost charges, for establishing defensible impact fees.

Additional significant cases that established legal precedent include a 1994 case on conservation rates, *Brydon v. East Bay Municipal Utility District* (EBMUD). This case also introduced the notion of the nexus between impact fees and a perpetual right of the property to be served a corresponding supply of water. Other cases concerned economic incentive rates. The *Brydon* case dealt primarily with the issue of conservation rate design. It upheld the validity of rates established by EBMUD in California to implement increasing rate blocks. This rate design results in proportionately larger revenues per unit sold from large users and serves as a price signal to these customers to conserve water. More recently, new state statutes in California have clarified that conservation rates, including water budget rates, need to be based on a cost nexus for each tier. Chapter 9 presents a detailed discussion of these new statutes and their expected impact on rate making, including intergenerational implications of impact fees.

Economic incentive rulings are not particularly clear-cut. In *Hicks v. the City of Monroe, LA* (1959), the ruling established that when acting in a proprietary role, no discriminatory rates must be observed. This means that when a utility acts as entrepreneur and has a profit motive in mind, it must adhere to nondiscriminatory rates among its customers served in this capacity. Definitions of nondiscriminatory rates will be provided in other sections of this handbook. Later cases, however, allowed rate

2 Also known as system development charges, connection fees, plant investment fees, participation fees, reimbursement fees, buy-in fees, hookup fees, system service fee, service commitment fee, etc. Collectively, these fees denote a one-time charge to new users as a prerequisite for receiving service. Chapter 6 contains a specific discussion of such fees based on an authoritative Colorado Supreme Court ruling (*Krupp v. Breckenridge Sanitation District*, 2001).

restructuring as an incentive to keep a large customer. An example of this is *Liberty Rice Mill Inc. v. the City of Kaplan, LA* (1996).

Cases dealing with taxation without representation may be found in *Burba v. City of Vancouver, WA* (1988), subsequently upheld by the Washington State Supreme Court, and *West Capital Associates v. City of Annapolis, MD* (1996). These cases discussed the issue of whether rates should be considered taxes. In *Burba*, outside-city users filed a complaint stating that, because they had no representation in the decision making regarding rates for outside users, these rates should be declared invalid and considered to be taxes levied on those particular users. The court ruled to the contrary and determined the validity of the rates that were charged, because they were based on a COS rate approach. Therefore, these rates could not be considered taxes. Numerous other cases dealing with the subject of taxation without representation have been reported. In general, these cases uphold the legal principles of reasonableness and nonarbitrariness in rate making and reject the notion of nonjustified rate discrimination.

Legal Principles in Rate Design

In this section, legal norms, such as lawful measures, reasonableness and discrimination, and burden of proof are reviewed. Also, possible factors to use in creating defensible rates are discussed.

Lawful Measures

In developing rates, it is generally accepted that rates established in a lawful manner and satisfying legal and technical principles of reasonableness and without unjust discrimination (see Cardinal Legal Rules and Cardinal Technical Rules in chapter 3), by a municipality are reasonable. A lawful manner would typically include the following steps:

1. A rate ordinance with details appropriate to the jurisdiction would be prepared.
2. The proposed rates would be discussed in one or more public hearings.
3. Subsequent to the public hearing, a vote by the governing body to adopt the rates would have to be moved and approved by a majority of a legal quorum.
4. The adopted rates must be recorded in an appropriate manner.
5. The rates adopted should then be implemented in the utility's billing system.

been employed in alternative investments. Thus, the rate of return on the owner's investment, or owner's equity, should be sufficient to attract other investors into the company. However, the ruling also focused attention on the promotion of the financial soundness of the utility. This major corollary to the return issue requires that the utility be managed efficiently and economically. In other words, without efficient and economical management, the utility would not automatically earn a reasonable return because it would likely exceed its permitted level of expenditures, or it would not be able to keep its service at a required quality level.

The post-*Bluefield* period is characterized by several cases, the first of which is the 1944 *Hope* case. In this particular case, *Federal Power Commission v. Hope Natural Gas Company*, 320 US 591 (1944), the issue of appropriate capital costs was delineated by the US Supreme Court. In its discussion of this decision, the Court established that legitimate capital costs should consider a combination of depreciation cost, debt service, stock dividends, and rate of return on owner's equity. However, no particular formula or caveats were offered to prescribe the proper combination of these variables. The earning experiences of other water utilities, segments of the utility industry, and unregulated utilities may also be used to establish a reasonable rate of return. In essence, this ruling established that the utility's allowable earnings should be a function of various factors that, altogether, would enable the utility to earn a reasonable return on its investor-provided capital.

Many other cases followed the *Hope* case. These cases were mainly oriented toward the definition of revenue requirements. The *Bluefield* and *Hope* cases are considered the seminal cases in determining the appropriate capital requirements for a regulated utility and for nonregulated utilities acting in a proprietary manner when serving outside-city or contract customers. Together with the *Smyth* case, as shown in Figure 1-2, these three cases may be thought of as the trunk of a tree while rate design issues may be thought of as the secondary branches that, together, shape the canopy of the tree.

Rate Design

Rate design concerns the manner in which individual customers, or groups of customers, are billed. Rate designs are developed to promote equity among customers by charging each customer in such a way that a customer is neither subsidized by nor subsidizes other customers. Several significant rate design issues were addressed and decided in cases such as *Durant v. City of Beverly Hills* (1940), *Village of Niles v. City of Chicago* (1980), and the *City of Pompano Beach v. Oltman* (1980).

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Equal Protection

In addition to the well-known cases illustrated in Figure 1-2 of chapter 1, the Equal Protection Clause of the 14th Amendment of the United States Constitution also applies to the pricing of utility services. Equal Protection under the Law requires governments and businesses to treat persons the same way without preferential (advantageous or disadvantageous) treatment. In the context of utility rates and charges, it has mainly been used to complain about unfair takings regarding property condemnations, but it has also been used for rate complaints where rates presumably exceed the cost of providing service. For example, complaints could state that it is not acceptable to charge one residential user more per unit of service than another residential user unless there is an actual utility service reason for doing so. Courts often find that the plaintiffs have not met the burden of proof to demonstrate a lack of rationality in the utility's rate development or alleged overcharges. Court rulings might state that utilities have wide latitude in selecting rate methodologies and rate practices. The same rulings may also caution that differentiation among customers not based on actual differences, such as the cost of service (sometimes expressed in terms such as "utility factors" or "cost-based rates"), might be cause for finding those rates impermissible and subject to redress by the court.[3] Thus, pricing practices based on criteria other than utility service factors, other than the utility's customer-service factors or characteristics, may be the basis for legal redress.

Customer service factors may be established in cost-of-service studies. Indeed, cost-of-service studies are conducted in order to determine such differences by allocating user charge revenue requirements to different customer classes based on their respective proportionate class service characteristics. Thus, if the unit cost of serving a relatively larger residential user is higher than the unit cost of serving a relatively smaller residential customer, a higher rate might be defensible. However, if the application of criteria other than those related to the "proportional cost basis," such as race, sex, social desirability, political motivations, customer or customer class income,[4] or noncost (or unquantifiable costs) based environmental considerations, are the basis for rate making, the resulting rates might not be in compliance with the equal protection provision and

3 For examples, *see Bennett Bear Creek Farm Water and Sanitation Dist. v. City and County of Denver Bd. of Water Comm'rs*, 928 P2d. 1254 (Colo, 1996); *General Textile Printing and Processing Corp. v. City of Rocky Mount*, 908 F. Supp. 1295 (E.D.N.C. 1995) (Equal protection claim).

4 Admittedly, there are other federal laws that appear inconsistent regarding the low-income criterion. For example, the Clean Water Act of 1972 (PL92-500) has a user charge provision that would allow a wastewater utility to subsidize wastewater rates for low-income customers by proportionally adding such subsidy costs to the revenue requirements of all other customer classes.

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case started in the 1870s. Interestingly, the development of railroads across the United States in the mid-1800s and the industrial might of Standard Oil Company thereafter prompted the development of antimonopoly measures. The railroads received significant public land grants to finance their new westbound lines. In addition to the revenues from land sales, they developed intricate price discrimination schemes to exploit their respective monopoly positions. Public outcries resulted in various state-based remedies. When state laws proved ineffective to stop these price exploitations, the federal government intervened to establish a regulatory commission that eventually became the Interstate Commerce Commission (ICC).

Under ICC tutelage, the concepts of fair and just rates received more rigorous intellectual attention. This body of knowledge developed by ICC became available for practical applications to other utilities besides the railroads. The Sherman Antitrust Act of 1890 legitimized the fight against monopolistic price behavior and paved the way for more sophisticated regulation in later years. Thus, when setting rates, publicly or privately provided water utility services became subject to certain legal principles stemming from these early cases and the Sherman Act. Furthermore, privately owned water utilities were subject to price regulation because such utilities are natural monopolies. A definition of a *natural monopoly* is an entity that requires very large investments to start production and is characterized by decreasing average costs when service expands. It is the sole provider of the goods or services within its service territory. The investment cost of a second provider would be prohibitively expensive and, therefore, a second provider of goods or services would not be economically viable. Being the sole provider, the natural monopoly's prices should be regulated to avoid monopolistic profits. The public interest is thereby served by such regulation. The most common issues addressed by water rate lawsuits have been over the concepts of rate base, rate of return, and rate design. Key cases on these issues are summarized in the following sections. For more in-depth coverage, please refer to the references at the end of this chapter.

Rate Base

Lawsuits originating in the 1870s and continuing into the early 1900s often dealt with rate-base issues. Rate-base issues typically concern the determination of the investment on which the private owner of the utility is entitled to obtain a return. Original cost of investments was the norm used for determining the rate base during this period. The rate base would be multiplied by a rate of return to establish the quantitative dollar return on the rate base. The rate of return is the percentage to be applied to the

rate base to generate the authorized return to the owner. The emergence of the fair value doctrine was associated with the US Supreme Court's ruling in the *Smyth v. Ames* case, 169 US 466 (1898). This method, discussed below, remained a common valuation method until the Court's 1944 *Hope* ruling refined the rate-base valuation issue.

The fair value doctrine focused on the establishment and determination of the rate base where other than book value costs were considered in determining the rate base of the utility. Often, replacement or reproduction costs would be determined. Typically, this implied that the original costs of the utility's assets would be indexed and, thereby, resemble replacement cost values. Replacement costs, in inflationary periods, would lead to a larger rate base. Many utilities aimed to establish the replacement cost as the basis for determining the rate base on which they were entitled to earn a return so that, given the same rate of return, they could increase their profits. Much controversy surrounded the fair use concepts and related rate calculations.

It should be noted that under the fair value doctrine, the actual capitalization of the company in terms of the ratio of owner's equity to debt was not much of a concern. The importance of considering the rate base in the context of owner-provided capital, however, has since become the guideline for the capital costs portion of today's rate proceedings. The *Bluefield* and *Hope* cases, which are discussed in the following section, set the standard for regulated rate making for all utilities.

Rate of Return

The *Bluefield* case of 1923 established the criteria for reasonable rates of return. This case is stated as *Bluefield Water Works & Improvement Company v. Public Service Commission of West Virginia*, 262 US 679 (1923). The *Bluefield* case established that there is no single method for determining a fair or reasonable rate of return. The seminal language in this ruling is stated as

> *The return should be reasonable, sufficient to assure confidence in the financial soundness of the utility, and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its public duties.*

To develop credit, the utility must be able to assure investors that its expected rate of return is the rate that the investor could have earned in other investments with similar risk exposure. In essence, this is the opportunity cost principle contained in introductory economic theory textbooks. This principle concerns itself with the value of the investors' money had it

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been employed in alternative investments. Thus, the rate of return on the owner's investment, or owner's equity, should be sufficient to attract other investors into the company. However, the ruling also focused attention on the promotion of the financial soundness of the utility. This major corollary to the return issue requires that the utility be managed efficiently and economically. In other words, without efficient and economical management, the utility would not automatically earn a reasonable return because it would likely exceed its permitted level of expenditures, or it would not be able to keep its service at a required quality level.

The post-*Bluefield* period is characterized by several cases, the first of which is the 1944 *Hope* case. In this particular case, *Federal Power Commission v. Hope Natural Gas Company*, 320 US 591 (1944), the issue of appropriate capital costs was delineated by the US Supreme Court. In its discussion of this decision, the Court established that legitimate capital costs should consider a combination of depreciation cost, debt service, stock dividends, and rate of return on owner's equity. However, no particular formula or caveats were offered to prescribe the proper combination of these variables. The earning experiences of other water utilities, segments of the utility industry, and unregulated utilities may also be used to establish a reasonable rate of return. In essence, this ruling established that the utility's allowable earnings should be a function of various factors that, altogether, would enable the utility to earn a reasonable return on its investor-provided capital.

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Rate Design

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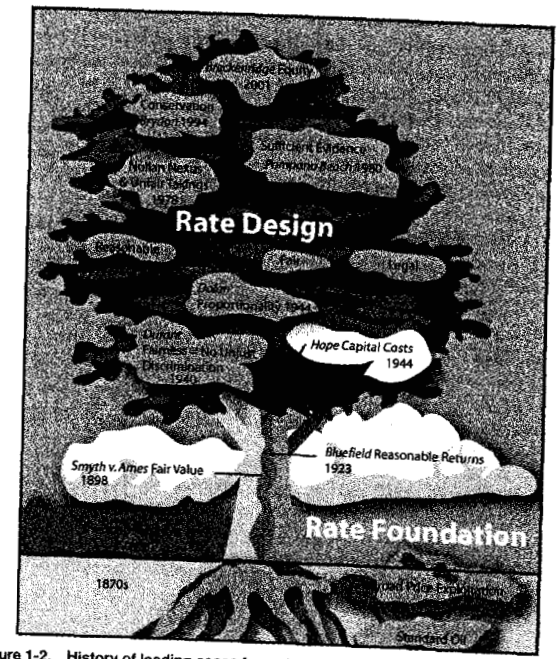

Figure 1-2. History of leading cases for water rates

The first of these cases, *Durant v. City of Beverly Hills*, dealt with presumptions of reasonableness, fairness, and legality. The second case dealt with the burden of proof, and the third dealt with sufficient evidence necessary to overturn the presumptions of reasonableness, fairness, and legality. Additional issues were also established in these leading cases regarding rate design. For example, the Durant case provided guidelines for the establishment of rates for outside-city users. Outside users are utility users located outside the municipality's legal boundaries. An additional case where this issue established legal precedent was in *Mohme v. City of Cocoa*, 328 So.2d 422 FL (1976).

FOLDER-E / REASONABLENESS AND NON-DISCRIMINATORY, PDF

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Reasonableness and Nondiscriminatory Rates

Legal briefs often refer to the norms of reasonable, fair and equitable, and nondiscriminatory rates. In rate-making literature, these terms connote a more specific meaning than that found in standard dictionaries. Reasonable water rates are rates that are based on generating sufficient revenues to operate the water utility in a prudent manner and without any undue discrimination among customers. The term *fair and equitable rates*, also called *cost-of-service-based rates*, in rate making refers to a cost causality between rates and the customer's bill. Such rates promote each customer to pay his or her cost share of the service without being subsidized by other customers or without subsidizing other customers. Developing fair and equitable rates means to avoid intraclass (among customers in the same class of service) and interclass (among customers in different classes of service) subsidization. Rates that lack uniformity, or discriminatory rates, are common in water rate making. Discriminatory rates among customers are not necessarily unlawful.

Discrimination among customers may refer to discrimination among different customer classes or among customers in the same customer class. Discrimination among customer classes may refer to the traditional distinctions of residential, commercial, industrial, wholesale, or outside-city customers. Discrimination within a customer class refers to rate schedules that address differences in rates charged to customers within the same class. Only unjust or unreasonable discrimination in rates is not permitted. For example, different rates for two residential customers with the same customer service characteristics, often described as *similarly situated*, constitute unreasonable or unjust discrimination. *Customer service characteristics* in this context does not denote the volume of water used but a difference in the peaking factors related to the service. Charging a larger residential user a higher volume unit rate than a smaller residential user, but absent correspondingly higher peaking factors related to capital costs, likely constitutes an intraclass rate inequity.

It is important to note that these legal standards do not require that a rate design chosen and implemented by a particular utility must be the best rate design, nor have mathematical exactitude, but merely be reasonable. AWWA Manual M1 (2000) has more detailed guidelines on revenue requirements, customer classifications, equitable rates, and rate design.

Burden of Proof

Another significant legal principle is that those who challenge the rates bear the burden of proving that the rates are unjustly discriminatory and unreasonable.

Thus, the burden of proof is heavily weighted against the plaintiffs in a rate proceeding. In other words, those who are dissatisfied with the particular rates in question must prove that these rates were indeed unreasonable and unjustly discriminatory to their interest. Mere complaints that rates are excessive, unjust, or discriminatory will not be sufficient to make a valid complaint. Plaintiffs must provide much more detailed arguments to make their complaints persuasive to the court.

Factors in Defensible Rates

Absent legal and policy constraints to developing cost-based rates, the following factors may be considered in determining reasonably discriminatory rates:

1. Cost of providing water service (revenue requirements) using industry-accepted methodologies
2. Nonresident or outside-city status of user
3. Customer classification practices
4. Customer service characteristics
5. Self-sufficient enterprise and charges or transfers to a city's general fund
6. Unusual expenses compared with past trends
7. Distance from the treatment facilities
8. Cost of installation and maintenance of mains
9. Cost of pumping water
10. Density of population served
11. Cost of reading meters
12. Cost of making service calls
13. Water conservation cost measures
14. Revenue stability issues pertinent to a customer class

All of these factors may provide a basis for establishing service cost differences in serving customers. Cost of service (COS) differences are the cornerstone for designing equitable rates for different customer classes. Of course, the rate analyst should first comply with any state laws or

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those equity requirements, California has tightened the requirements for legally defensible conservation rates.

This chapter will describe how the recent legislative changes in California water rate making have reconciled traditional cost-of-service rate-making goals of avoiding subsidizations of customers, whether between classes (interclass) or within one class (intraclass), with local community goals to promote water conservation. An introductory discussion of inter-generational rate equity, with references to several key legal cases, is also provided since the widely adopted practice of impact (capacity) fees for new customers has generated new concerns regarding rate-making practices and equity rights, including possible property rights, associated with such one-time capital payments.

The chapter is organized so it can be read as a stand-alone treatise on the equity of water rates and conservation with the California experience presented as a case study. It starts with an overview of relevant water pricing legal principles at the federal and state level; it continues with a short review of rate equity concepts and norms based on traditional utility rate literature, with an explanation of rate equity using illustrations and modern terminology and graphics concepts. The following section comprises a review of California legislation and case law regarding water rates and budget rates. A few of those cases are detailed from the cost nexus viewpoint that was more recently addressed in 2009. Next, the 2009 changes to the statutes (AB 2882 and 3030) are discussed with specific references to the water consumption tier components of budget rates and the explicit nexus that now is required between cost-of-service and individual tier consumption rates. The chapter concludes with a summary of California's legal turning points pertaining to water rates and the conclusions drawn from the current status of rate requirements for California and, possibly, other states.

Water Pricing Legal Principles

Chapter 1 of this book reviewed the history of water rates as shaped by legal precedent set in the United States. The foundations for the legal concepts that now are codified in federal and state laws go back to the 19th century. Prompted by customer price exploitation practices exercised by railroads that were granted franchises by the United States, federal laws were enacted to disallow utilities from exercising monopolistic pricing powers. The definition of utility was expanded from the railroad and interstate transportation industries to eventually include electric, gas, water, wastewater, telecommunications, and other utilities. The concepts of fair and just, or equitable, service rates became the principles used to

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fight monopolistic pricing behavior. In turn, these concepts paved the path for more comprehensive regulation in the 20th century. As reviewed in chapter 1, these regulatory norms apply to both privately owned and publicly owned utilities. In addition to federal laws, state laws often restate or elaborate on the federal utility rate-making requirements. In general, the 19th- and early 20th-century regulatory norms addressed the capital cost portion of utilities' revenue requirements. Rate-of-return arguments also advanced the requirement of efficiency in operating a utility. An allowable return on capital investments is accompanied with the notion of efficiency in serving customers. Rate design issues became more prevalent from the 1940s. Over time, these cases promoted a clearer understanding of rate equity among customers in terms of the concepts of just, reasonable, fair, and legal rates.

The definition of rate equity used in this book is shown in Figure 9-1. This figure presents a summary of several rate-making terms first described in pages 8 and 9 of chapter 1 of this book. When using the phrase *equitable rates,* these rates contain no subsidization among customers. The emphasis in this definition is on the avoidance of using rates charged to any customers or customer classes that include costs intended to be used to subsidize any other customer(s) or customer class. It does not necessarily pertain to using a community's general fund to assist certain customers such as low-income customers. The provisions of any low-income assistance programs might depend on state laws or other legal provisions applicable to a particular situation. Additional details will be discussed below.

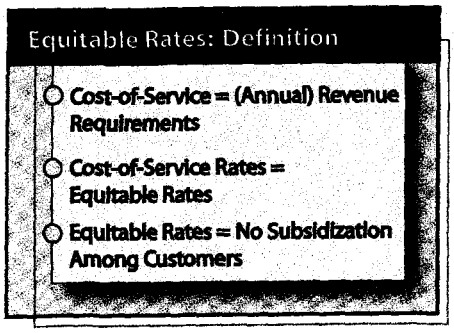

Figure 9-1 Definition of equitable rates

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Equal Protection

In addition to the well-known cases illustrated in Figure 1-2 of chapter 1, the Equal Protection Clause of the 14th Amendment of the United States Constitution also applies to the pricing of utility services. Equal Protection under the Law requires governments and businesses to treat persons the same way without preferential (advantageous or disadvantageous) treatment. In the context of utility rates and charges, it has mainly been used to complain about unfair takings regarding property condemnations, but it has also been used for rate complaints where rates presumably exceed the cost of providing service. For example, complaints could state that it is not acceptable to charge one residential user more per unit of service than another residential user unless there is an actual utility service reason for doing so. Courts often find that the plaintiffs have not met the burden of proof to demonstrate a lack of rationality in the utility's rate development or alleged overcharges. Court rulings might state that utilities have wide latitude in selecting rate methodologies and rate practices. The same rulings may also caution that differentiation among customers not based on actual differences, such as the cost of service (sometimes expressed in terms such as "utility factors" or "cost-based rates"), might be cause for finding those rates impermissible and subject to redress by the court.[3] Thus, pricing practices based on criteria other than utility service factors, other than the utility's customer-service factors or characteristics, may be the basis for legal redress.

Customer service factors may be established in cost-of-service studies. Indeed, cost-of-service studies are conducted in order to determine such differences by allocating user charge revenue requirements to different customer classes based on their respective proportionate class service characteristics. Thus, if the unit cost of serving a relatively larger residential user is higher than the unit cost of serving a relatively smaller residential customer, a higher rate might be defensible. However, if the application of criteria other than those related to the "proportional cost basis," such as race, sex, social desirability, political motivations, customer or customer class income,[4] or noncost (or unquantifiable costs) based environmental considerations, are the basis for rate making, the resulting rates might not be in compliance with the equal protection provision and

3 For examples, see *Bennett Bear Creek Farm Water and Sanitation Dist. v. City and County of Denver Bd. of Water Comm'rs*, 928 P2d. 1254 (Colo, 1996); *General Textile Printing and Processing Corp. v. City of Rocky Mount*, 908 F. Supp. 1295 (E.D.N.C. 1995) (Equal protection claim).

4 Admittedly, there are other federal laws that appear inconsistent regarding the low-income criterion. For example, the Clean Water Act of 1972 (PL92-500) has a user charge provision that would allow a wastewater utility to subsidize wastewater rates for low-income customers by proportionally adding such subsidy costs to the revenue requirements of all other customer classes.

give rise to unjust or undue price discrimination complaints. This does not mean that other criteria cannot be considered when designing rates. To the contrary, such additional criteria can and often should be considered. However, the application of such criteria should be considered after the cardinal legal and technical rate requirements for rate making (see chapter 3) are satisfied. Further discussion on the prioritization of rate design criteria follows below.

State laws will typically have equal protection provisions in their respective statutes that are consistent with the US constitutional provisions. In some instances, courts and public utility commissions express the equal protection requirements using language that refers to the requirement that rates need to be "fair, reasonable, and nondiscriminatory."[5] Equal protection issues in rate making will likely, but not exclusively, occur in the rate design part of utility services pricing.

Other concepts within federal law that pertain to water rate making include *due process* and *unfair takings*. *Due process* refers to the proper notification procedures associated with rate changes and the avoidance of decisions that are "arbitrary, capricious, or an abuse of discretion." *Takings* refers to the provisions of the 14th amendment of the US constitution that prohibit private property from being taken for public use without due compensation. In the context of water rates and fees, *takings* is an issue usually associated with impact fees. Chapter 6 of this book contains a detailed discussion of impact fees. The earlier chapters of this handbook introduced these legal principles and discussed these terms at greater length. The impact fee issue will be revisited below in the context of the 1994 decision in *Brydon v. East Bay Municipal Utility* California Appellate Court decision, 24 Cal. App.4th 178, 29(Cal.Rptr.2nd) 128 (1994).

Unjust Price Discrimination

Price discrimination by itself is not prohibited by law. For example, differentiation of customer classes is a form of discrimination based on the grouping of customers with similar user service characteristics such as residential versus commercial or industrial users, or inside-city versus outside-city customers. Only unjust price discrimination is prohibited. Even otherwise legitimate governmental interests may not result in unjust rates or contain unreasonable discrimination. Equitable rates, by definition, are cost-based rates that avoid unjust price discrimination. Price discrimination is not only limited to interclass prices but can also occur in intraclass (for example between single-family home customers) and intergenerational perspectives (between new users and existing users).

5 Kron, *supra* note 1 p. 148.

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FOLDER G, COST OF CAPITAL, CORP BOND RATES

IRS.gov

Composite Corporate Bond Rate Table

Legend:

- Corporate Bond Weighted Average Interest Rate = CB Wtd Avg
- Permissible Range = xx to xxx%
- Composite Corporate Bond Rate = CCBR

Note: Under changes to section 412 and the addition of section 430 by the Pension Protection Act of 2006, certain interest rates rely on the corporate bond weighted average computed under section 412(b)(5)(B)(ii)(II) as in effect for plan years starting in 2007. The table below provides those corporate bond weighted averages.

Month/Year	CB Wtd Avg	90 to 100%	CCBR
Feb-11	6.10	5.49 to 6.10	-
Jan-11	6.12	5.51 to 6.12	5.57
Month/Year	**CB Wtd Avg**	**90 to 100%**	**CCBR**
Dec-10	6.14	5.52 to 6.14	5.60
Nov-10	6.17	5.55 to 6.17	5.43
Oct-10	6.21	5.59 to 6.21	5.20
Sep-10	6.24	5.62 to 6.24	5.17
Aug-10	6.28	5.65 to 6.28	5.16
Jul-10	6.32	5.68 to 6.32	5.44
Jun-10	6.34	5.71 to 6.34	5.66
May-10	6.37	5.73 to 6.37	5.67
Apr-10	6.39	5.75 to 6.39	5.84
Mar-10	6.40	5.76 to 6.40	5.90
Feb-10	6.41	5.77 to 6.41	6.01
Jan-10	6.42	5.77 to 6.42	5.88
Month/Year	**CB Wtd Avg**	**90 to 100%**	**CCBR**
Dec-09	6.42	5.78 to 6.42	5.88
Nov-09	6.44	5.80 to 6.44	5.79
Oct-09	6.46	5.82 to 6.46	5.76
Sep-09	6.47	5.83 to 6.47	5.79
Aug-09	6.48	5.83 to 6.48	6.03
Jul-09	6.47	5.83 to 6.47	6.39
Jun-09	6.46	5.81 to 6.46	6.64
May-09	6.43	5.78 to 6.43	6.95
Apr-09	6.39	5.75 to 6.39	7.05
Mar-09	6.35	5.72 to 6.35	7.22
Feb-09	6.32	5.69 to 6.32	6.83
Jan-09	6.29	5.67 to 6.29	6.47
Month/Year	**CB Wtd Avg**	**90 to 100%**	**CCBR**
Dec-08	6.27	5.64 to 6.27	6.64
Nov-08	6.20	5.58 to 6.20	7.72
Oct-08	6.14	5.52 to 6.14	7.90
Sep-08	6.10	5.49 to 6.10	6.98
Aug-08	6.07	5.46 to 6.07	6.76
Jul-08	6.04	5.44 to 6.04	6.79

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Jun-08	6.02	5.42 to 6.02	6.69
May-08	6.00	5.40 to 6.00	6.47
Apr-08	5.99	5.39 to 5.99	6.45
Mar-08	5.96	5.36 to 5.96	6.46
Feb-08	5.94	5.34 to 5.94	6.36
Jan-08	5.92	5.33 to 5.92	6.16
Month/Year	**CB Wtd Avg**	**90 to 100%**	**CCBR**
Dec-07	5.90	5.31 to 5.90	6.28
Nov-07	5.89	5.30 to 5.89	6.14
Oct-07	5.88	5.29 to 5.88	6.14
Sep-07	5.86	5.27 to 5.86	6.23
Aug-07	5.84	5.26 to 5.84	6.33
Jul-07	5.83	5.25 to 5.83	6.33
Jun-07	5.81	5.23 to 5.81	6.32
May-07	5.80	5.22 to 5.80	6.01
Apr-07	5.80	5.22 to 5.80	5.98
Mar-07	5.80	5.22 to 5.80	5.84
Feb-07	5.79	5.21 to 5.79	5.85
Jan-07	5.78	5.21 to 5.78	5.89
Month/Year	**CB Wtd Avg**	**90 to 100%**	**CCBR**
Dec-06	5.79	5.21 to 5.79	5.75
Nov-06	5.79	5.21 to 5.79	5.77
Oct-06	5.79	5.21 to 5.79	5.94
Sep-06	5.78	5.21 to 5.78	5.95
Aug-06	5.78	5.20 to 5.78	6.11
Jul-06	5.77	5.19 to 5.77	6.30
Jun-06	5.75	5.18 to 5.75	6.31
May-06	5.74	5.17 to 5.74	6.29
Apr-06	5.74	5.17 to 5.74	6.18
Mar-06	5.75	5.17 to 5.75	5.89
Feb-06	5.75	5.18 to 5.75	5.73
Jan-06	5.77	5.19 to 5.77	5.65
Month/Year	**CB Wtd Avg**	**90 to 100%**	**CCBR**
Dec-05	5.78	5.20 to 5.78	5.72
Nov-05	5.79	5.21 to 5.79	5.78
Oct-05	5.81	5.23 to 5.81	5.68
Sep-05	5.84	5.25 to 5.84	5.44
Aug-05	5.87	5.28 to 5.87	5.42
Jul-05	5.90	5.31 to 5.90	5.37
Jun-05	5.94	5.35 to 5.94	5.26
May-05	5.97	5.38 to 5.97	5.41
Apr-05	6.01	5.41 to 6.01	5.55* (*Corrected Number)
Mar-05	6.03	5.43 to 6.03	5.62
Feb-05	6.07	5.46 to 6.07	5.36
Jan-05	6.10	5.49 to 6.10	5.48
Month/Year	**CB Wtd Avg**	**90 to 100%**	**CCBR**
Dec-04	6.14	5.52 to 6.14	5.57

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FOLDER G, COST OF CAPITAL
FOLDER G, COST OF CAPITAL, HISTORICAL PRIME RATE

Historical Prime Rate

1990 - present		1983 - 1990	
Effective Date	Rate*	Effective Date	Rate*
12-16-08	3.25%	07-31-89	10.50%
10-29-08	4.00%	06-05-89	11.00%
10-08-08	4.50%	02-24-89	11.50%
04-30-08	5.00%	02-10-89	11.00%
03-18-08	5.25%	11-28-88	10.50%
01-30-08	6.00%	08-11-88	10.00%

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FOLDER-G, COST OF CAPI.
GUC PROMISSORY NOTE

PROMISSORY NOTE

$527,400

Tucson, Arizona
February 12, 2008

For value received, Five Hundred Twenty-Seven Thousand Four Hundred and no/100 Dollars ($527,400.00) (the, "Loan"), this Promissory Note ("Note") is made as of the date stated above by Goodman Water Company, an Arizona public service corporation ("Borrower"), to the order of E.C. Development, Inc., an Arizona corporation ("Lender").

RECITALS

A. Borrower owns and operates a public service corporation and holds a Certificate of Convenience and Necessity ("CC & N") authorizing it to provide the public with water.

B. Lender is one of the owners and developers of property (the "Property") located within the CC & N.

C. Pursuant to Decision No. 56118, the Arizona Corporation Commission has authorized Borrower to issue long term debt in the amount of this Promissory Note.

D. The Borrower desires to borrow funds necessary for the expansion of the water utility plant for storage and pumping, booster, and other facilities necessary to develop the water plant to serve the Property.

AGREEMENT

FOR VALUE RECEIVED, Borrower promises and agrees as follows:

1. Payment. Borrower shall pay to the order of Lender the principal sum of Five Hundred Twenty-Seven Thousand Four Hundred and no/100 Dollars ($527,400.00) (the "Principal Amount"), with interest thereon at the rate of eight and one-half percent (8.5%) per annum from the date of this Note, until paid in full, to be paid as provided below. Principal and interest shall be payable to Lender in lawful money of the United States of America, at 6340 N. Campbell Avenue, Suite 278, Tucson, Arizona 85718, or at such other place as the Lender may from time to time designate in writing.

2. Loan. Borrower hereby agrees to use the Loan only for the expansion of the water utility plant for storage and pumping, booster and other facilities necessary to develop the water plant to serve the Property.

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and its successors and assigns and shall be enforceable by the parties hereto and their respective successors and assigns; "Borrower" shall be deemed to include the undersigned and any and all makers, endorsers, payees, sureties and guarantors hereof; "Lender" shall be deemed to include the payee, owner and holder hereof, now and in the future.

14. Choice of Law; Amendment. This Note shall be governed by and construed and enforced under the laws of the state of Arizona. This Note may not be modified or amended except by a writing signed by all parties.

15. Interpretation. This Note constitutes the entire agreement and understanding between the parties with respect to the subject matter hereof and expressly supersedes and revokes all other prior or contemporaneous promises, representations and assurances of any nature whatsoever with respect to the subject matter hereof. The paragraph headings in this Note are solely for the convenience of the parties and shall not affect the interpretation of the provisions hereof. This instrument shall not be construed strictly in favor of or against either Borrower or the Lender, but according to its plain meaning. If any provision hereof shall be held invalid or unenforceable, the remaining provisions shall continue in full force and effect and shall not be impaired thereby.

BORROWER:

Goodman Water Company,
an Arizona corporation

By: _____
Name: James A. Shiner, President
Date: 2-12-08

LENDER:

E.C. Development, Inc.,
an Arizona corporation
By: _____
Name: Alexander H. Sears, President
Date: 2-12-08

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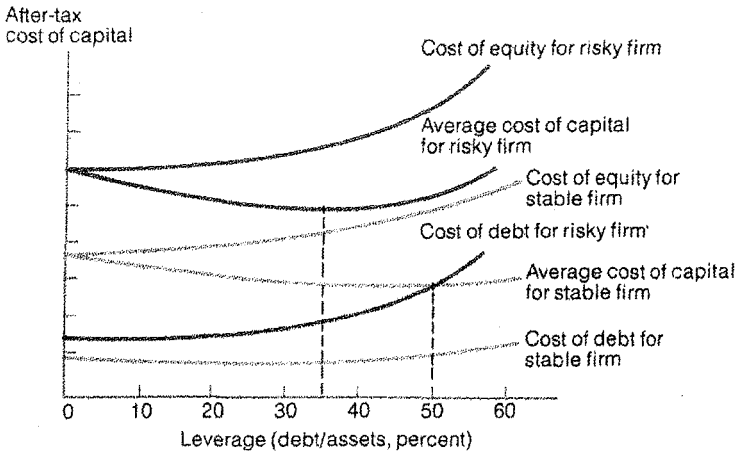
FOLDER 6, COST OF CAPITAL.PDF
WESTON & BRIGHAM

WESTON & BRIGHAM

firm is planning to raise a given amount of new capital during the year. For a larger or smaller amount of new capital, some other cost figures might be applicable; the optimal capital structure might call for a different debt ratio, and the minimum average cost of capital *(k)* might be higher or lower. This point is discussed in detail later in the chapter.

Figure 19–5
Hypothetical Cost of Capital Schedules for High-risk (R) and Low-risk (S) Firms



High-risk and Low-risk Firms

Shown in Figure 19–5 are the cost of capital schedules for a firm in a risky industry (R) and for one in a stable industry (S). Firm R, the one on which Figure 19–4 was based, is Universal Machine; firm S is a relatively stable, safe company. We have already examined the interrelationships of the curves of Universal Machine—after declining for a while as additional low-cost debt is averaged in with equity, the average cost of capital for firm R begins to rise after debt has reached 35 percent of total capital. Beyond this point, the fact that both debt and equity are becoming more expensive offsets the fact that the component cost of debt is less than that of common equity.

While the same principles apply to the less risky firm, its cost functions are quite different from those of Universal Machine. In the first place, S's overall business risk is lower, giving rise to lower debt and equity costs at all debt levels. Further, its relative stability means that less risk is attached to any given percentage of debt; therefore, its costs

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FOLDER G
WIDOW & ORPHAN

Widow-and-orphan stock is relatively low-risk stock from well-known firms that pay high dividends. Widow-and-Orphan stocks are generally chosen during bear markets and ignored during bull markets. This is because these companies are perceived to be able to maintain their dividend payment schedule through difficult financial times. A widow-and-orphan stock is a conservative investment with limited possibility for large gains or losses. In brief it is a stock characterized by smaller than average price movements, a relatively high dividend, and little likelihood of dividend reduction or serious financial problems.

In the past, Widow-and-orphan stocks were considered to be among the most desirable of stockoptions . Some widow and orphan offerings were associated with companies that held a monopoly in a given industry. Utilities were/are often referred to as widow-and-orphan stocks because of their monopoly and dividend yield.

A Widow-and-orphan-stock was the blue chip stock of its day. *Banks were excluded from this class as the result of their involvement in the bubble and crash of 1929. It was not until several years after the government-instituted regulations like the Glass-Steagall Act, which separated investment banking and "regular" commercial banking, that "widows and orphans" was again applied to commercial banks.*

FOLDER - 6
WIDOW & ORPHANS

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Do "Widow And Orphan" Stocks Still Exist?

by Rick Wayman (Contact Author | Biography)

Filed Under: Banking, Bonds, Entrepreneur, Stocks

In the past, the term "widows and orphans" was used to describe stocks with a relatively high degree of safety and dividend income. Because they had relatively minimal risk and provided income to feed the family, these kinds of stocks were literally thought to be the only investments suitable for widows and orphans. The term is noteworthy because it was generally used during market bottoms, but today it means something different. (Explore arguments for and against company dividend policy, and learn how companies determine how much to pay out, in *How and Why Do Companies Pay Dividends?*)

History of the Stock

A widow-and-orphan stock was the blue chip stock of its day: the stock of a large well-known firm that was thought to have an unassailable market leadership position and that paid a "good" dividend. This term was generally applied to utility stocks (electric, gas and telephones). Utilities are often referred to as widow-and-orphan stocks because of their monopoly (or, if you prefer, government-mandated market leadership) and dividend yield. Banks were excluded from this class as the result of their involvement in the bubble and crash of 1929. It was not until several years after the government-instituted regulations like the Glass-Steagall Act, which separated investment banking and "regular" commercial banking, that "widows and orphans" was again applied to commercial banks. Depending on the business cycle, the term was also applied to railroad and auto stocks.

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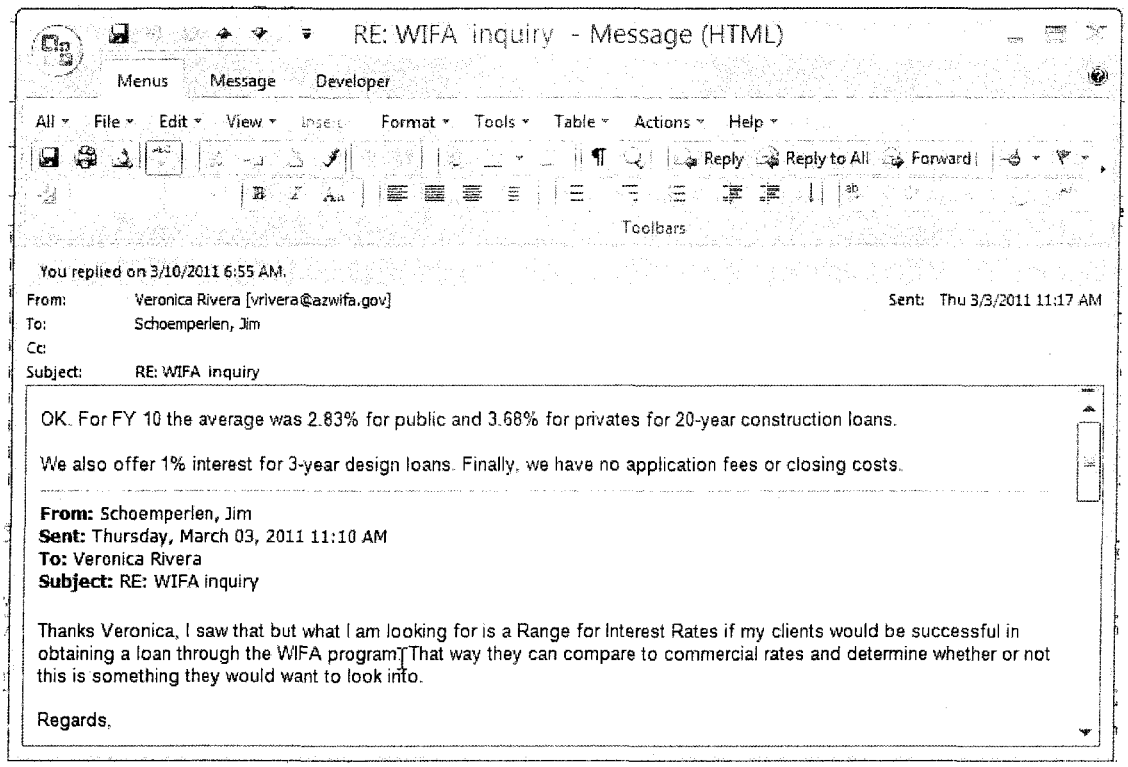
E. **WIFA Loan & Subsidy Rates** – The WIFA Board of Directors has established a target interest rate ranging between 70% and 95% of tax-exempt AAA Bond Rate for government entities and 70% to 95% of the prevailing prime rate for non-government entities. The subsidy rate is based on the local fiscal capacity which is measured by the area's median household income, user rates and charges, the community's outstanding and proposed debt and cost effectiveness of project. Interest rates/subsidies on individual loans will be set pursuant to the criteria below:

- ✓ Priority of the project;
- ✓ Local fiscal capacity of the area served by the system requesting assistance; and,
- ✓ Lending capacity of Arizona's DWRF.

POLICY - G [redacted]
WIFA LOAN RATES, 2008

FOLDER 6, COST OF CAPITAL CURRENT WIFA RATE. JPG



RE: WIFA inquiry - Message (HTML)

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Reply Reply to All Forward

Toolbars

You replied on 3/10/2011 6:55 AM.

From: Veronica Rivera [vrivera@azwifa.gov] Sent: Thu 3/3/2011 11:17 AM
To: Schoemperlen, Jim
Cc:
Subject: RE: WIFA inquiry

OK. For FY 10 the average was 2.83% for public and 3.68% for privates for 20-year construction loans.

We also offer 1% interest for 3-year design loans. Finally, we have no application fees or closing costs.

From: Schoemperlen, Jim
Sent: Thursday, March 03, 2011 11:10 AM
To: Veronica Rivera
Subject: RE: WIFA inquiry

Thanks Veronica, I saw that but what I am looking for is a Range for Interest Rates if my clients would be successful in obtaining a loan through the WIFA program. That way they can compare to commercial rates and determine whether or not this is something they would want to look into.

Regards,

FOLDER - H
GOODMAN WATER
EXPANSION PLANS
EXPANSION WEST OF ORACLE, PDF

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

JEFF HATCH-MILLER, Chairman
WILLIAM A. MUNDELL
MARC SPITZER
MIKE GLEASON
KRISTIN K. MAYES

IN THE MATTER OF THE APPLICATION OF GOODMAN WATER COMPANY FOR AN EXTENSION OF ITS CERTIFICATE OF CONVENIENCE AND NECESSITY.

DOCKET NO. W-02500A-05-0443

DECISION NO. 68444

OPINION AND ORDER

DATE OF HEARING: December 8, 2005

PLACE OF HEARING: Tucson, Arizona

ADMINISTRATIVE LAW JUDGE: Jane L. Rodda

APPEARANCES: Mr. Michael McNulty, LEWIS & ROCA, LLP, on behalf of Goodman Water Company; and

Ms. Linda Fisher, Staff Attorney, Legal Division, on behalf of the Utilities Division of the Arizona Corporation Commission.

BY THE COMMISSION:

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Having considered the entire record herein and being fully advised in the premises, the Arizona Corporation Commission ("Commission") finds, concludes, and orders that:

FINDINGS OF FACT

1. On June 17, 2005, Goodman Water Company ("Goodman" or "Company") filed with the Commission an Application to Extend its Certificate of Convenience and Necessity ("CCN" or "Certificate") in Pinal County.

2. By its application, Goodman is seeking Commission authority to extend its service territory to include a planned development known as Eagle Crest West.

3. On July 12, 2005, Commission Utilities Division Staff ("Staff") notified Goodman

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that the application was insufficient pursuant to the requirements of the Arizona Administrative Code.

4. On August 23, 2005, the Company provided additional documentation in support of its application.

5. On September 16, 2005, Staff filed a Sufficiency Letter indicating the application had met the sufficiency requirements of A.A.C. R14-2-402(C).

6. By Procedural Order dated September 22, 2005, the matter was set for hearing in Tucson, Arizona, and procedural guidelines and deadlines were established.

7. On November 18, 2005, Staff filed its Staff Report that recommends approval of the application.

8. The hearing convened as scheduled on December 8, 2005, at the Commission's offices in Tucson, Arizona.

9. Goodman currently provides water utility service to approximately 500 connections in an 800 acre development known as Eagle Crest located near Oracle Junction in Pinal County, Arizona.

10. Goodman was originally incorporated in 1985 as Panarama Properties, Inc. dba Goodman Water Company. The Commission approved a CC&N in Decision No. 56118 (September 15, 1988). Pursuant to Decision No. 65651[1] (February 18, 2003), on March 5, 2003, Goodman filed a Notice of Name Change, indicating that the corporation changed to Goodman Water Company. The only shareholders of Goodman are Mr. James Shiner, President, Mr. Alexander Sears and D.R. Horton, Inc.

11. The proposed extension area will extend the Company's current service territory by approximately 188 acres. The legal description of the proposed extension area is attached hereto, and incorporated by reference, as Exhibit A. The proposed extension area is contiguous to Goodman's current CC&N.

12. Goodman currently has two wells with a total production capacity of 1,240 gallons

[1] Decision No. 65651 authorized Goodman to issue $1,047,680 of common stock.

per minute (gpm), and 400,000 gallons of storage capacity. The existing production and storage can serve approximately 1,000 connections.

13. Based on historical growth rates, Goodman's current CC&N area could have a total of 1,300 customers at the end of five years. The Company predicts 450 additional customers in the proposed extension area at the end of five years.

14. The proposed extension area will be developed in two phases. Ground breaking for the first phase will not occur prior to June 2006. The development will be a mixed use community with approximately 420 residential lots and 27 acres of commercial development. The master developer is Eagle Crest West LLC, which is owned by Mr. Shiner and Mr. Sears.

15. The Company proposes to construct a new 800 gpm well and a 530,000 gallon storage tank in the proposed extension area which will serve customers in the Company's existing CC&N area as well as in the proposed extension area.

16. Staff believes that the existing system has adequate production and storage capacity to serve the existing and proposed CC&N extension area within a conventional five-year planning period and can reasonably be expected to develop additional storage and production as required in the future.

17. Goodman will finance the facilities required for the expansion through a combination of a sale of stock[2] and Developer Line Extension Agreements. Advances in Aid of Construction are often take the form of Main Extension or Line Extension Agreements ("MXAs"). The minimum criteria for MXAs are established by A.A.C. R14-2-406. Usually the agreements require the developer to design, construct and install (or cause to be installed), all facilities to provide adequate service to the development. The developer pays all costs of constructing the required facilities. Upon acceptance of the facilities by the utility, the developer conveys the facilities to the developer through a warranty deed. Utility companies will often refund 10 percent of the annual water revenue associated with development for a period of 10 years. Staff recommends that Goodman file with Docket Control, as a compliance item in this docket, for Staff review and approval, a copy of the

[2] The Company understands that it is required to come to the Commission for financing authority.

fully executed main extension agreements for water facilities for the extension area within 365 days of a decision in this matter.

18. The Arizona Department of Environmental Quality ("ADEQ") has determined the Company's existing system is currently delivering water that meets the water quality standards required by Arizona Administrative Code, Title 18, Chapter 4.

19. The U.S. Environmental Protection Agency ("EPA") has reduced the arsenic maximum contaminant level ("MCL") in drinking water from 50 micrograms per liter ("µg/l") to 10 µg/l. The date for compliance with the new MCL is January 23, 2006. The most recent lab analysis by the Company indicates that the arsenic level in its source supply wells in 2 µg/l. Based on this arsenic concentration, the Company is in compliance with the new arsenic MCL.

20. Goodman is within the Tucson Active Management Area. Because Goodman supplies less than 250 acre-feet of water annually for non-irrigation use, it is considered a "small provider" and is not subject to the gallons per capital per day ("GPCD") limit and conservation rules, and is only required to monitor and report water use. ADWR indicates that Goodman is in compliance with its monitoring and reporting requirements.

21. A Curtailment Plan Tariff is an effective tool to allow a water company to manage its resources during periods of shortages due to pump breakdowns, droughts, or other unforeseeable events. Goodman has an approved Curtailment Plan Tariff that has been in effect since February 18, 2003.

22. The Company is current with its property and sales taxes, and is in complaicne with all Commission Orders and rules.

23. Goodman has proposed to provide water utility service to the extension area under its authorized rates and charges. Staff concurs.

24. Every applicant for a CC&N and/or CC&N Extension is required to submit to the Commission evidence showing that the applicant has received the required consent, franchise or permit from the proper authority. If the applicant operates in an unincorporated area, the company has to obtain a franchise from the county. Staff recommends that Goodman be required to file with Docket Control, as a compliance item in this docket, a copy of the franchise agreement from Pinal

County for the requested area within 365 days of the decision in this matter.

25. At the time of the hearing, Goodman submitted evidence that it had applied to Pinal County for a franchise, but as of the date of this Order, had not submitted a copy of the County franchise as recommended by Staff.

26. Staff further recommends that Goodman file with Docket Control as a compliance item in this docket, a copy of the developer's Certificate of Assured Water Supply for the "Eagle Crest West" extension area, within 365 days of the effective date of this Order.

27. Staff also recommends that the Decision granting the requested CC&N extension be considered null and void should Goodman fail to meet any of Staff's recommended conditions within the times specified.

28. Because an allowance for the property tax expense of Goodman is included in the Company's rates and will be collected from its customers, the Commission seeks assurances from the Company that any taxes collected from ratepayers have been remitted to the appropriate taxing authority. It has come to the Commission's attention that a number of water companies have been unwilling or unable to fulfill their obligation to pay the taxes that were collected from ratepayers, some for as many as twenty years. It is reasonable, therefore, that as a preventive measure Goodman should annually file, as part of its annual report, an affidavit with the Utilities Division attesting that the company is current in paying its property taxes in Arizona.

CONCLUSIONS OF LAW

1. Goodman is a public service corporation within the meaning of Article XV of the Arizona Constitution and A.R.S. §§ 40-281 and 40-282.

2. The Commission has jurisdiction over Goodman and the subject matter of the application.

3. Notice of the application was provided in accordance with law.

4. There is a public need and necessity for water service in the proposed extension area set forth in Exhibit A.

5. Goodman is a fit and proper entity to receive a CC&N to provide water service in the proposed extension area.

6. Staff's recommendations contained in Findings of Fact Nos. 17, 23, 24, 26 and 27 are reasonable and should be adopted.

ORDER

IT IS THEREFORE ORDERED that the application of Goodman Water Company for an extension of its Certificate of Convenience and Necessity to provide water service in Pinal County as described in Exhibit A hereto, is approved.

IT IS FURTHER ORDERED that Goodman Water Company shall charge its existing rates and charges within the approved extension area.

IT IS FURTHER ORDERED that Goodman Water Company shall file with Docket Control as a compliance item in this docket, for Staff review and approval, a copy of the fully executed main extension agreement(s) for water facilities for the extension area within 365 days of the effective date of this Order.

IT IS FURTHER ORDERED that Goodman Water Company shall file with Docket Control as a compliance item in this docket, a copy of the developer's Certificate of Assured Water Supply for the "Eagle Crest West" extension area, within 365 days of the effective date of this Order.

IT IS FURTHER ORDERED that Goodman Water Company shall file with Docket Control as a compliance item in this docket a copy of the franchise agreement from Pinal County for the requested area within 365 days of the effective date of this Order.

IT IS FURTHER ORDERED that the Decision granting the requested CC&N extension be considered null and void should Goodman Water Company fail to meet the above conditions within the times specified.

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IT IS FURTHER ORDERED that Goodman Water Company shall annually file as part of its annual report, an affidavit with the Utilities Division attesting that the Company is current in paying its property taxes in Arizona.

IT IS FURTHER ORDERED that this Decision shall become effective immediately.

BY ORDER OF THE ARIZONA CORPORATION COMMISSION.

CHAIRMAN COMMISSIONER

COMMISSIONER COMMISSIONER COMMISSIONER

IN WITNESS WHEREOF, I, BRIAN C. McNEIL, Executive Director of the Arizona Corporation Commission, have hereunto set my hand and caused the official seal of the Commission to be affixed at the Capitol, in the City of Phoenix, this 2nd day of Feb., 2006.

BRIAN C. McNEIL
EXECUTIVE DIRECTOR

DISSENT _____

DISSENT _____

FOLDER-1, GOODMAN WATER EXPANSION PLANT
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Arizona Corporation Commission
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IN THE MATTER OF THE APPLICATION OF **GOODMAN WATER COMPANY** FOR AN EXTENSION OF ITS CERTIFICATE OF CONVENIENCE AND NECESSITY	Docket No. W-02500A-05-0443 Motion To Withdraw Application

On February 2, 2006, in Decision No. 68444 (the "Decision"), the Arizona Corporation Commission (the "Commission") approved an extension of the Certificate of Convenience and Necessity ("CC&N") held by the Goodman Water Company (the "Company"). The owner of the land within the territory affected by the Decision wished to develop that property, and having a committed water utility was (and always is) a precondition for its successful development. Further descriptions of the efforts undertaken by the landowner can be found in the Procedural Order entered by the Administrative Law Judge in this matter on the 13th day of April, 2007. After several years of efforts to identify a wastewater utility and to rezone the property, the landowner ultimately faced a collapsed real estate market, as a consequence of which all previous efforts became unavailing, and all present efforts, deferred.

As a result, the landowner was unable to obtain a Certificate of Assured Water Supply, and the Company cannot provide the Commission, at least during the timeframes

previously established, a copy of the Certificate or with a main extension agreement, both being the predicates for extending its CC&N as described in Decision No. 68444.

While the landowner and the Company both are confident that in the fullness of time the conditions for the development of the property will come again, the Company is mindful that the Commission's previous approval of an extension is unlikely to be repeated. Consequently, Goodman Water Company respectfully moves that the application it filed in this matter, to extend its Certificate of Convenience & Necessity, be withdrawn, without prejudice, so that the same may be refiled at such time as the landowner may be able to accomplish the rezonings and assured water supply certifications that are a prerequisitive to the development of the property in question.

RESPECTFULLY SUBMITTED this 2nd day of April, 2010.

LEWIS AND ROCA

MH Hall for

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Tucson, Arizona 85701-1611
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Attorneys for Goodman Water Company

ORIGINAL and thirteen (13) copies of the foregoing filed this 2nd day of April, 2010, with:

Arizona Corporation Commission
Utilities Division
Docket Control
1200 W. Washington Street
Phoenix, Arizona 85007